

Grade bullies



'Continuous assessment corrupts the relationship between teacher and student. . . Will the GCSE lose credibility?'

At the end of the course, she asked me when I expected to finalize my grades. I foolishly told her the truth, and on the assigned day she rang to ask me her grade. She was a good student, but the grade didn't satisfy her expectations. She told me she would come round to discuss a reassessment. I refused this, and in cowardly fashion quickly took my wife shopping in case the

When the results were published the student came to see me in a rage and accused me of marking him down because I believed he was guilty of plagiarism. Perhaps he was

I know the examining boards have worked hard to develop good systems for modernization of course work, but this is very difficult.

I may be accused of relying too much on anecdotal evidence. In my opinion too many reforms in schools have been rushed through without careful scrutiny of what really happens in real teaching situations. If the new exam loses credibility with employers, Sir Keith Joseph's commitment to the GCSE may prove a costly error.

Special feature: School visits
Extra: Craft, design and technology

'Beleaguered' London heads start helpline

Headteachers did not have to feel that they had failed when they rang the new service, he said. "We are doing more for stability and management

● The National Association of Governors and Managers this week voiced its concern over the damage done to schools in controversial cases where headteachers had been suspended. It called for suspension procedures to be clearly specified, adding: "Inadequate procedures and informal methods of dealing with specific situations do far more harm than good."



A light sea
wheeze

The unions are now insisting on an increase in the proportion of the higher paid Principal Teacher posts from 15 per cent of all staff to 26 per cent. They also want the extra allowance paid to such to be "substantially improved."

All teachers currently on Scale 4 and the Senior Teacher scale should be

The fragility of the agreement was demonstrated this week by the continuing disruption of lessons in Liver-

Continued on page 3

He said one of the most surprising findings concerned the early age at which a small number of pupils took up the habit. "The people who are smoking on the whole smoke very small quantities and perhaps one a week, but they start quite young. Some start before 12," he said.

10. I shall answer you
11. Trouble any son
may produce (8)
12. Yet one may be at
one's lowest point
(6)
13. He may bring food
from the terrace (7)
14. Belief of a company

3. Irreverence shown
by the little devil I
have yet to reform
(7)
4. Wake up after mid-
night and complain
(6)
5. Belief of a company

Solution to puzzle

GOVERNMENT	
DIARY	
SCHOOL TO WORK	
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CULT BOARD	
AND CROSSWORD	
CLASSIFIED	

Ted Wragg: 103
after Austin

City Tech
City Technical College

BEHOLD

The Sixties
Revisited

and 22 right.

The Education Bill

12 @ 13

**EXTRA:
CDT**

37-46

Highways and byways

The interest which the Committee of Vice-Chancellors and Principals is showing in changing the secondary school curriculum (page 3) is warmly welcome. To seek to increase the flow of students into higher education shows a wise (if transparent) understanding on the part of the universities of their own interest.

Faced with the demographic downturn and the Green Paper's projections of falling numbers in the 1990s, the universities are understandably keen to attract a wider entry than that traditionally presented by the sixth-form, two and three A level route. But in this, their private interest mirrors the public.

As Bob Doe shows in a feature article in next week's *TES*, the vice-chancellors are not alone in stirring the pot. The curricular and methodological changes brought about by the GCSE make a review of A levels essential. Such a review would obviously affect university entrance arrangements and freshman-year courses.

Sir Keith Joseph expressed his hope that the change from norm to criteria referencing would, in time, raise the standard of performance of pupils in the bottom half of the range to the level now achieved by the average. Whether this is practically possible, and if so how soon it can be achieved, only time will show.

What is plain, however, is that it is based on the

assumption that the definition of success can be broadened, to get away from the present tacit assumption that "real" achievement is still limited to the 22-23 per cent of pupils who leave the maintained schools with 5 O levels or their equivalent.

If the GCSE succeeds in this, then there must be provision for a larger post-16 cohort and an approach to the sixth-form curriculum which applies the same principles to A levels which are going to inform the new exam. Everything seems to be wide open. Alongside the curricular changes which are associated with examination reform, there are others which are made possible by the spread of modular approaches and the move to tertiary and sixth-form colleges. And in the background - or perhaps foreground - there is Mr Oscar de Ville and his National Council for Vocational Qualifications to ensure that academic considerations are held in a broader perspective.

Mr Kenneth Baker, the Secretary of State, clearly believes the tide has turned in education's favour. Now could be the moment to go for broke. But there are plenty of snags, too. The Youth Training Scheme continues to offer a financial incentive to the pupil who leaves at the earliest opportunity. The division of funding for 16-19 provision between Manpower Services Commission and the local authorities is arbitrary and has sooner or later to be sorted out.

The emphasis on vocational education has consistently underplayed the vocational value of sound general education. In the course of working out a serviceable secondary curriculum for the 21st century, someone has to bring the various 16-19 strands together and weave them into a coherent pattern which makes institutional and administrative sense.

What is encouraging is that the vice-chancellors have recognized that the universities - and polytechnics - will have to change no less than the secondary schools to facilitate this metamorphosis. They will have to make adjustments to accommodate more entrants who do not arrive by the royal road. They will have to take more candidates with non-traditional qualifications, or no paper qualifications at all, and this will demand changes in their courses which could end up as radical as those demanded in the schools.

Is there the will for a new leap forward? Will the universities find, in the end, they cannot take the binding collective decisions needed to get their act together? Will Mr Baker be forced to placate his right-wingers by insisting that the defence of "standards" demands the defence of A levels and the pretence that O level survives under the GCSE umbrella? What is now needed is vision and boldness. Who will follow up the initiative which the vice-chancellors have made?

COMMENT

How much am I bid?

Mr Baker's glossy prospectus for his 20 city technology colleges (page 7) presents his new baby in glorious technicolour.

The references to the curriculum show that the first three years will follow the curricular principles of *Better Schools*, while years four and five will demonstrate how the Technical and Vocational Education Initiative might look when applied across the board in a high-powered secondary school.

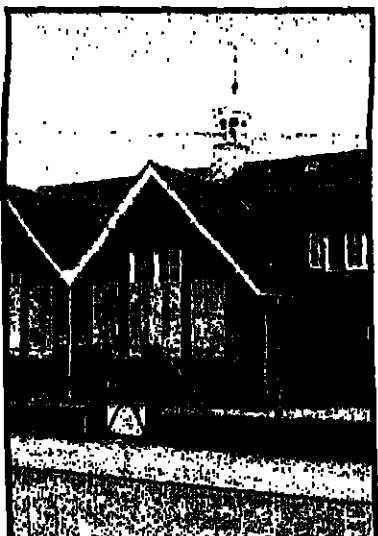
Modern languages have an honoured place in the core. The humanities are not excluded but will be part of the optional studies beyond 14. There will be provision for work experience for all.

The selection procedures will be geared to one of the conditions of the DES grant - that each school should recruit across the full ability range of the population in its catchment area.

The list of cities where it is hoped to establish the CTCs includes few surprises. The speed with which developments go ahead is likely to depend on the attitude of the local authorities in the areas concerned. It is believed that some authorities have already expressed interest in giving house-room to a CTC or, at least, see virtue in flogging off a surplus school.

But it is difficult to see the likes of the Inner London Education Authority being as amenable, and if Mr Kenneth Baker wants to get national coverage by September 1988 he will need to start compulsory purchase procedures fairly soon. Details of the first proposals are expected by the end of the year. The plan is to put the schools in run-down inner city areas in a deliberate attempt to use this new initiative to do something to improve the local environment.

Whatever deleterious effects the CTCs might have on the maintained schools serving these inner-city catchment areas, the arrival of these new super-colleges could well help to stimulate urban renewal, or at least to slow down the outward movement of population and (possibly) encourage new colonization of middle-class pe-



Inner city: renewal needed

rents who can recognize an educational bargain when they see one.

Mr Baker is giving the impression that he has reason to expect a good response from industry - he has hopes of raising £1 million a school from local firms - and he has budgetary cover for £35 million to £40 million a year for recurrent grant.

He sees his new creations as intermediate institutions, poised midway between the maintained and the independent sectors, giving parents another choice to add to the stark alternatives of public and private schooling. And though he will wisely refuse to speculate beyond the first 20 schools for which he has Cabinet approval, it is quite obvious that he regards this as a door-opening exercise. Once he gets his foot in the door, there will be no going back.

There is no way of reconciling the opposing views of Mr Baker and the local authorities - and especially the Labour-controlled local authorities - which will have to play host to most of the CTCs. The authorities will rightly point out that 20 super schools are irrelevant to the needs of the huge tracts of the country which will not see hide nor hair of them.

They will regard them as a diversion of effort and money. For another £40 million a year, the extension of the TVET across the system could have been given a bit more credibility. In reply Mr Baker will point to the shortcomings of inner-city schools at the moment and tell the authorities it

would be easier to accept their strictures if the schools in their slums had already been turned into beacons of light. (But even beacons, or magnets, can cause problems, as Anne Sofer found in the States - see back page). Mr Baker insists that there is plenty of high potential around for all the secondary schools if only they (and their communities) would give it the chance to blossom.

It would be ironic if in this debate it were the local authorities who emerged as the exponents of the limited pool of ability, and Mr Baker as the apostle of expansion.

Closures and quality

It has been observed more than once in these pages that a policy which involves closing down schools, classrooms or even desks does not fit easily with extended parental choice. You have to keep empty places to allow for shopping around. But this is not going to stop the Secretary of State pressing ahead on both fronts at once.

This week's Industrial Society conference on the Audit Commission's report elicited a useful confirmation from Sir David Hancock, the DES Permanent Secretary, that the Department intends to use its own calculations on surplus secondary places, rather than the Commission's.

But his speech also contained a clear warning that the draft criteria, carefully named *Providing for Quality*, should be read very closely by any L.E.A.s contemplating secondary reorganization. The final version due at the end of the year is to be the bible.

Sir David did his best to persuade his audience that all the turmoil of reorganization could pay off in quality, that the DES really didn't sit on proposals, and that the Government just might think again about financial incentives. As so often, however, it was Mr David Hart of the National Association of Head Teachers who brought the meeting down to brass tacks. All experience of the anxiety and damage brought about by badly-managed reorganization schemes confirms that he is absolutely right to insist that reorganization must be "sold" more effectively to everyone concerned in terms of both money and consultation.

It is quite astonishing how little seems to have been learnt from experience or about how to manage closure or amalgamation. The DES circular won't provide for quality unless Mr Hart's message is accepted.

Whose freedom?

Mr David Selbourne, the Ruskin College lecturer in trouble with his students and his employers for writing in *The Times*, hits the headlines a week before Mr Baker returns to the House of Commons with his "academic freedom" amendment to the Education Bill.

Mr Selbourne, a distinguished politics tutor with 20 years' service at Ruskin, has published occasional articles in *The Guardian* and *The Times*. Being a man of independent mind, he has not always pleased party and union critics. But what has now caused students to boycott his lectures and tutorials, his colleagues and principal to disown him and his employers to censure him is writing for *The Times*, a News International publication.

Academic freedom is quite clearly at stake - including Ruskin's traditionally close relationship with Oxford University. This episode brings shame on the Labour movement as a whole. It shows what a tangle the party and the unions have let themselves get drawn into in defence of the indefensible - the printing unions whose chickens came home to roost in Wapping.

When hostility to Wapping causes a Labour L.E.A. to refuse to use *The Times* to advertise teaching posts and finds it can't fill vacancies, this is stupid and bad for the schools. But academic freedom is something else. Everyone suffers when this is attacked.

no comment

"Mr C has rung from 8 high school to say that they have a problem regarding their rugby fixture on Saturday - they have just been informed that their pitch has been sold for building development."

Message received by school office in Warwickshire from a school in Hereford and Worcester.

Second opinion

A backward step for technology?

Previous experience often helps evaluate an educational proposal - there is nothing new about technical schools. The local education authorities which I served for some 20 years, had, unlike most L.E.A.s, a complete network of technical schools when I joined it.

Many of these schools were not left-over from the era when technical schools had been small adjuncts of the local technical college.

When I left Kent in 1984, none of the technical schools remained, but they have not been incorporated into a comprehensive system. The Kent technical schools had always been a separate entity, they became grammar schools, choosing a selective school, over a grammar school.

The children attending technical schools came mainly, therefore, from families who had made their own choice. In these circumstances it is understandable that the technical schools strove to appear, and become, as similar to grammar schools as possible. In other words, essentially parental choice and a which killed the technical school.

When change became likely, members of the education community suggested that all the non-technical schools in Kent should be given title of technical schools.

There were, however, practical political objections: the possibility of total confusion and the fear that pupils of the technical schools, by number, might not welcome change, although they might be happy to see their old schools become grammar schools. Most influential was the point that, such happened to the technical schools, technical education was being increasingly important.

In these circumstances it would be a serious mistake to use the term to describe any particular category of schools. Selective or comprehensive technical education should be a by-product to the school, and not a title.

It is surely this latter point which should be the key one in the debate. The weakness of the new proposal is that it is a specifically link the name "technical" to a small number of institutions which would be catering for a minority of pupils.

This would be a development which given the importance of technological education to pupils, able and less able alike, in all schools, would be precisely the wrong direction.

The irony of the situation is that the Department of Education and Science is already taking beneficial action co-operation with the Manpower Services Commission and the Local Education Authorities to support the Technical and Vocational Education Initiative.

More encouragement and support sources given to these schemes would be to ensure that the programmes cover the whole range, will help technical and technological education in a positive and large-scale way. Separate technical colleges, far from ensuring the expansion of potentially useful initiatives, could exercise a negative effect.

W. H. P. was formerly county education officer for Kent.

IN BRIEF

Ruskin rumpus

Ruskin College, Oxford, has been asked by the Department of Education and Science to explain its actions in a row over academic freedom. The DES, which provides 51 per cent of the adult education college's funding, has intervened following allegations that a politics tutor has been prevented from giving lectures by a student boycott.

Mr David Selbourne, 49, a tutor at Ruskin for more than 20 years, was censured earlier this year by students for writing an article for *The Times* during the present printing dispute.

Mr Selbourne is now suing the college, claiming constructive and unfair dismissal. - *THES*

Mass lobby

Parents campaigning for more Government spending on school buildings, books and teachers' salaries will stage a mass lobby of Parliament on March 17. The lobby, organized by PARENTS - Put Additional Resources into Education Now for Today's Schoolchildren, an alliance of parents and teachers formed in June, will coincide with a meeting at Central Hall, Westminster.

The group this week launched a leaflet for the parents of eight million schoolchildren, urging them to campaign for an end to "shabby buildings, shared textbooks and inadequate equipment".

Parents show your concern available from 43 Stonebridge Road, Northfleet, Gravesend, Kent DA11 9DS.

Advert slump

Hounslow council turned down an attempt by the leader of the SDP minority party to reverse a decision by the education committee to withdraw advertising from *The Times Educational Supplement* in disapproval of News International's Wapping dispute with the print unions.

An amendment to Mr Jim Daly's motion attributed the fall in the number of applicants for teaching posts, when *TES* advertising was discontinued, to the Secretary of State's failure to guarantee sufficient finance to make teaching attractive to would-be recruits.

War and peace

The Joint Matriculation Board is hoping to offer a peace and conflict studies A level course for examination in 1990. Discussions on syllabus content are still going on, but it is expected to have a multidisciplinary approach and to involve biology, economy, philosophy and technology.

A spokesman said the board was conscious of the need to avoid any political bias.

Main rerun

Continued from page 1

pool, Birmingham and the Inner London Education Authority over cover for absent teachers.

Meanwhile, radical proposals for a new salary structure which will sweep away rewards for advanced level teaching will be put before college residential meeting in Nottingham this weekend.

The employers - who will be led by Mr Neil Fisher from the ILEA when he takes over the chairmanship from Mr John Pearson of Wakefield tomorrow - want a more equitable pay structure.

They want to establish the grading of courses system which is used as the basis of calculating promoted posts. This means that colleges and polytechnics with more advanced level courses get higher paid staff.

Equitable employers want a more equitable system which would reflect the quality of work done by lecturers. It is a degree level, or on the National Schemes.

The National Association of Teachers in Further and Higher Education is unlikely to agree to such a method used to determine numbers.

NEWS

Vice-chancellors expect GCSE to end A levels

by Jeremy Sutcliffe

University vice-chancellors want to abolish A levels and are considering a "fundamental" restructuring of their degree courses.

A working party has been set up by the Committee of Vice-Chancellors and Principals to study the implications of widening access to university courses. It will also examine the impact of the new GCSE on sixth form syllabuses, and ultimately on higher education.

The move by the VCVP is a recognition of the far-reaching implications of the GCSE. The new examination, with its accent on practical, communicative skills, differs markedly from the more formal A level, the current benchmark for university admission.

Vice-chancellors now believe change is inevitable, with a replacement for the A level needed by 1988. GCSE students' arrival in the sixth form. The first admissions to universities based on whatever system is decided upon to replace A level will be in 1990.

The VCVP has received a paper, written by Dr Clive Wake, secretary of the Standing Conference on University Entrance, which sets out the implications of the changes.

The paper points out that the need to widen access to universities, and the need for changes in admission procedures and courses, had been brought about by a number of factors. These include the development of vocational qualifications such as the Technical and Vocational Education Initiative and Business and Technician Educa-

tion Council courses.

The decline in the number of university applicants holding traditional qualifications, and the success of polytechnics which have been more willing to accept applicants with alternative qualifications, are also said to be factors.

Another major concern is the decline in the number of adequately qualified mathematics and physics applicants, particularly for engineering courses. One possible solution could be to offer pre-degree or "bridging" courses to help mature students to overcome their lack of basic scientific knowledge.

The plan to introduce across the secondary school system records of achievement, or profiling, is also expected to affect universities radically, because of their emphasis on "transferable personal skills", rather than academic achievement.

The paper states that widening access should aim to attract holders of alternative academic qualifications such as the European Baccalaureate, holders of vocational qualifications (TVEI, BTEC), mature students, and students who have taken access courses.

The paper says support for widening access will have "important implications for the structure and content of university courses, as well as for teaching methods".

Universities should "not only adopt more flexible entrance requirements for relevant degrees but should also review the content and curricula of their degree courses", says the paper.

Dr Wake told vice-chancellors recently: "The universities are seen as dominating the sixth form curriculum because of their entrance requirements and the need on the part of the schools to meet them, to the extent that the secondary curriculum is organized for the benefit of the future applicant and not for the benefit of the education of all."

"With the growing stress on the importance of providing an opportunity for education beyond 16 for a much larger proportion of the young, this domination of the curriculum by the universities is seen as a major impediment."

Dr Wake told *The TES* this week: "A levels will have to change fairly fundamentally to accommodate the GCSE. Universities will not be able to exclude these effects. It is going to be necessary for them to look at their courses because they are not going to get the same kind of applicants. They are going to be very different, which is why we are looking at a fundamental review of universities."

Professor Maurice Shock, chairman of the VCVP and vice-chancellor of Leicester University, said the Government would have to look very hard at the impact of the GCSE on A levels. "The GCSE is proving to be the catalyst for change. It is not another examination. It is a whole new way of doing things. That is bound to have a knock-on effect. It is ludicrous for pupils who are studying the new syllabus to be expected then to concentrate on A levels, whose entire basis is the old O level," he said.



Jumping for the GCSE: not a likely slogan, but Mr Geoffrey Hawkes, head of Noadswood School, Dithen Purlieu, near Southampton, has so far raised £1,000 towards extra resources needed to introduce the new exam by his sponsored parachute jump last weekend.

WHAT TEACHERS WANT FROM THEIR UNION

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Ten years on, Ted Wragg (right) concludes that the Ruskin College speech by premier James Callaghan unleashed far more than a farcical Great Debate

Sunny Jim's storm clouds overhead

When Mr James Callaghan made his celebrated speech about education at Ruskin College on October 18, 1976, launching the so-called Great Debate, it was altogether a curious event. Although he was Prime Minister, and therefore entitled to pronounce on any issue, Sunny Jim was not renowned for his profundity on the topic of education.

Indeed, what he had previously said about it could have been safely accommodated on the back of a postage stamp, leaving sufficient room for a list of the Department of Education and Science's achievements during the 1970s.

Yet the shock waves of what was a passionate, if not especially original piece of oratory, have continued to rock education for a full decade.

It is symbolic that October 16, 1986, almost 10 years to the day since the Ruskin address, was the date by which local education authorities had to submit their in-service plans to the DES, marking a degree of central control over their affairs which was almost unthinkable a decade ago.

The reason why a Prime Minister, more at home with economic and foreign affairs than education, felt the urge to propel himself at the populace with an appeal for widespread public debate, lies in a complex set of circumstances which obtained at that time. Labour held on to power for four years by a frail majority and a pact with the Liberals.

During this period, Rantlin Rhodes Boyson and an aggressive Conservative opposition were attacking education, primary schools in particular, for being trendily progressive and neglecting basics.

The frustration felt by Callaghan was that his Government seemed unable to exercise any direct leverage on the education system, which at that time, a couple of years after local government reorganisation, was firmly under the control of 104 larger and more powerful I.E.A.s.

What is more there had recently been two critical reports on the DES, one by the Organization for Economic Co-operation and Development, the other by a parliamentary select committee, which highlighted what everyone knew: that the DES had, on the surface, great powers, but in practice little real authority over I.E.A.s.

Three days before Callaghan's speech, the TES gave front-page prominence to a leaked 63-page report on the state of the nation's schools, known as the "Yellow Book", which had been prepared for the Prime Minister by the DES. The headline read: "DES report to Prime Minister sparks off angry protests." The critics were objecting both to the centralist tone, and the impossibility of implementing the proposals.



Media man: the Callaghan package attracted a furious response

The "Yellow Book" formulated four areas of concern: the teaching of the three Rs in primary schools where more rigour was called for; the curriculum for older children in comprehensive schools; the reform of the examination system, an issue echoed by DES mistrust of the National Union of Teachers-dominated Schools Council; and the problems of 16 to 19-year-olds, who were not going on to higher education. Increasing unemployment, especially among unqualified school-leavers, was already pushing this last topic higher up the agenda.

To no one's surprise, these were precisely the four issues put on the agenda for public debate in what the TES called Jim Callaghan's "homely rhetoric" at Ruskin College the following Monday. But as Denis Lawton points out in his book *The Politics of the School Curriculum*, by the time the ritualized regional conferences, which eventually constituted the DES version of the Great Debate, took place in February and March 1977 at such culturally outstanding locations as Peterborough, the agenda had been deftly changed.

Now the four issues had become: the school curriculum 5 to 16; the assessment of standards; the education and training of teachers; and school and working life. Looking back 10 years later, one can begin to see how control in three of these areas, curriculum 5 to 16 excluded, has slipped firmly and irrevocably into the hands of the Secretary of State.

The Great Debate itself was a bit of a farce. Hapless ministers stood before hundreds of motley invitees looking poleaxed, listening not so much to a debate as to a series of prepared position statements. No sooner had

the chairman requested a genuine discussion of the issues than various members of the stage army would leap up and read their death of Binquo speech.

At the festival I was silly enough to attend, one union delegate seemed to be reading each sentence of his written memorandum twice. Perhaps it was just an unusual stammer or the effect of student protesters banging on the windows outside because of education cuts. This was in the days before student leaders wanted to be merchant bankers and accountants, or join the Social Democratic Party and own a Labrador.

During the months of the Great Debate, I found myself deeply involved in a parallel scrutiny of education, acting as specialist adviser to the Parliamentary Select Committee which was enquiring into the attainments of school leavers. These commitments offer back-benchers a rare and gleefully-seized opportunity to call the nation's power-brokers to account. Party differences are sunk as MPs strive to extract the truth, even if this embarrasses their own government.

Janet Fookes MP chaired the committee superbly, and it astonishes me that she has never been given ministerial office, when some of ministerial rank: power have. Looking back at the transcripts of hearings is like a journey back through much more than a mere decade.

There is one particularly interesting parallel between then and now which illustrates change over the intervening 10 years very well. Mrs Shirley Williams was Secretary of State at the time, and she had tried to put £7 million into in-service training. A survey by the National Association of

Schoolmasters had shown that local authorities had spent 80 per cent of the money on other things.

Janet Fookes pressed her about this and Shirley Williams seemed resigned in her reply: "...there are problems here which are the result of the inability of the DES to finance by specific grant or direct grant any form of educational innovation... it is very much a matter for each local authority what proportion of its budget it spends on in-service training, even if the central ministry specifically sets aside a sum for that purpose, as indeed we did this year."

In 1983 a senior DES person came to Exeter to meet Professor Richard Pring and myself to tell us that Sir Keith Joseph had driven a 125 train through that particular piece of orthodoxy. He too had extracted £7 million from the Treasury for in-service. Apparently, he intended at that time to give much of it to British Oxygen to train headteachers. It was said, though what relevance expertise in shunting cylinders of oxygen around the nation held for heads of primary and secondary schools was not made clear.

In the event, that particular phantasm evaporated, but Sir Keith Joseph's earmarking in the in-service drive was the thin end of a centrally-driven wedge which was later to pry open a quarter of I.E.A.s' non-advanced further education, produce direct grants for curriculum development, and a £200 million minister-controlled in-service package.

In the field of initial training, it also led to the establishment of the Council for the Accreditation of Teacher Education, which vetted all BEd and PGCE courses according to a list of criteria drawn up by the Secretary of

State. This has brought one of the arenas of the Great Debate's agenda, the education and training of teachers, firmly under the Government's heel.

Another area, that of school and working life, is also under tight Government control, but, through TVEI, TRIST and other initiatives, it is the Manpower Services Commission which holds the purse. This is hardly surprising.

In the 1976-77 Parliamentary Select Committee report on the attainment of school-leavers, we had written: "We are greatly concerned, however, at the contrast between the intensive action over provisions for the 16 to 19 group by the Department of Employment, through its agencies like the MSC and TSA, and the lower level of DES activity."

In reality, the kind phrase "lower level" was a euphemism for "subhuman". We asked the DES to do a day-release for all, an unlikely dream back in 1976. Their reply was that, at 1977 prices, it would cost more than a billion pounds. So far a curriculum was concerned the answer was brief: "The further education and training needs of young people who receive little or none at present have not been properly identified."

The DES tactic seemed to be profess ignorance, mention a ludicrously long timescale such as 20 years, talk telephone numbers about its costs, and with luck it will wait on the next breeze. It did not, and the MSC filled the huge vacuum left by DES indifference.

In the last 10 years, primary education in particular has been unfunded and almost at a standstill, though things in it engineered by individual teachers. There has been no impact on standards - however, from the Assessment of Performance Unit, whose reports have been so scathing, though greeted with a grin of indifference from the educational world but indirectly from such HM Inspectorate papers as the primary school survey showing that only one class in 10 was getting a decent science programme. The Assessment of Performance Unit has not had a sinister effect on the curriculum of schools, as we once feared, nor have HM papers on curriculum 5 to 16 tied teachers to prescribed formulas, though itself now has a higher profile.

Ten years after the Ruskin speech is the under-funding of education which has rushed to the top of the agenda. The real theme of the speech, however, concerned local authority and teacher control of education.

Callaghan wanted more government involvement, but Sir Keith Joseph, who loaded it, albeit dropping the bullet and inserting a couple of lead front in the process, but it was Sir Keith Joseph who actually pulled the trigger and shot the Schools Council and the local authorities.

Professor Ted Wragg is director of the school of education, Exeter University. *Perspectives* no 26, entitled *Post-kin plus Ten*, price £2 (post and packing included) is available from the Curriculum and Resources Centre, School of Education, Exeter University.



D	I	A	R	Y
I	A	R	Y	
A	R	Y		
R	Y			
Y				

Right turn

Remember him 30 years ago, lean, dark, saturnine, the tan-smeared by the French comrades dangling from his shoulders, one of their Glanzen dangling from his lips, heart-quickener of every first-year Paulanara as he led the university Communist Party onto the streets over

Suez? Last month he stood again on the scene of his blissful dawn, sternly suited, blinking unrecognizably at what three decades of expansion had done to the Leeds campus. Then he changed his shoulders and stomped off to his seminar at that most exclusive club of the haute bourgeoisie, of which he is an invited member, the Headmasters' Conference, Lawrence Norcross of Highbury Grove, notorious right-wing scourge of his notorious left-wing employers, the Inner London Education Authority, could find not even the ashes of his youthful revolutionary dreams.

The DES tactic seemed to be profess ignorance, mention a ludicrously long timescale such as 20 years, talk telephone numbers about its costs, and with luck it will wait on the next breeze. It did not, and the MSC filled the huge vacuum left by DES indifference.

In the last 10 years, primary education in particular has been unfunded and almost at a standstill, though things in it engineered by individual teachers. There has been no impact on standards - however, from the Assessment of Performance Unit, whose reports have been so scathing, though greeted with a grin of indifference from the educational world but indirectly from such HM Inspectorate papers as the primary school survey showing that only one class in 10 was getting a decent science programme. The Assessment of Performance Unit has not had a sinister effect on the curriculum of schools, as we once feared, nor have HM papers on curriculum 5 to 16 tied teachers to prescribed formulas, though itself now has a higher profile.

Ten years after the Ruskin speech is the under-funding of education which has rushed to the top of the agenda. The real theme of the speech, however, concerned local authority and teacher control of education.

Callaghan wanted more government involvement, but Sir Keith Joseph, who loaded it, albeit dropping the bullet and inserting a couple of lead front in the process, but it was Sir Keith Joseph who actually pulled the trigger and shot the Schools Council and the local authorities.

Professor Ted Wragg is director of the school of education, Exeter University. *Perspectives* no 26, entitled *Post-kin plus Ten*, price £2 (post and packing included) is available from the Curriculum and Resources Centre, School of Education, Exeter University.

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Freedom speaks

Three gems from the Freedom Association's fringe meeting at last week's Conservative Party conference. One speaker talked of "The extreme Left seizing power in town halls". Hold on, wasn't there something called a cross on a ballot paper? Others called for the abolition of local authorities. A lady then put a horrific thought into the heads of the audience: "But what if a socialist government is returned to power?" And another asked plaintively what could be done to prevent left-wing parents becoming school governors. Kenneth Baker's new plan to increase parent power. Some are clearly more free to speak than others.

None of the changes needed could be implemented without more money, which is urgently needed for the complete retraining of teachers rather than the present piecemeal approach. Mr Maurice Holt, principal lecturer in education at the College of St John, Plymouth, criticises the increasingly vocational nature of the curriculum.

Professor Richard Pring, head of education at the University of Exeter, says some of the "radical" approaches of vocational education are "appalling" and "a narrow, organised work of many evils."

Another in your honour: "TARGET is included on COMETT and is the first project connected with the programme to receive EEC funds, as announced in April."

Acronym

A drive to recruit unemployed West German teachers and overcome shortages of maths and physics staff faces an uphill struggle, report Paul Bendelow from Bonn and James Meikle in London

Little chance of exodus, say unions

Serious reservations have been expressed by West German teachers' leaders about the plan to recruit unemployed maths and physics staff to offset shortages in United Kingdom schools.

The plan surfaced following a letter to Bonn indicating the British Government's desire to explore the recruitment of West German teachers for posts that are increasingly difficult to fill with "home-grown" candidates.

It was signed by Mr Chris Patten, who is no longer at the Department of Education and Science but who distinguished himself by building bridges with a disaffected workforce.

Herr Dieter Wunder, the chairman of the biggest teachers' union in West Germany, the GEW, said he would advise any of his country's 80,000 unemployed teachers against accepting posts in England and Wales in the present circumstances.

He cited as one of the reasons "the unsatisfactory level of salaries and conditions in British education" and said he was unhappy at the prospect of stop-gap imports of West German teachers detracting from the need to solve underlying problems.

Also, his union is anxious to persuade ministers to improve education in their own country by creating more teaching posts.

Herr Wunder said it would, in any case, be wrong to expect a mass exodus of West German teachers to Britain.

Most unemployed teachers in the Federal Republic are arts and humanities graduates, reflecting the stronger pull of these subjects in the 1970s when



these staff began their training. Scientists have also generally found it easier to move into industry, where physics and maths graduates are in demand.

Second, salaries and conditions in West German education compare favourably with other European countries. Most teachers are civil servants, enjoying considerable fringe benefits such as subsidized health insurance and pension schemes.

The gross monthly starting salary for a Gymnasium (grammar school) teacher is DM3,400 - roughly £1,100 at current exchange rates - with additional increments for married teachers with children.

Many teachers are now employed on less than full contracts - with corresponding salary reductions - but few would be likely to give up the chance of progressing to full-time employment for the sake of working abroad.

And for jobless teachers, even the remote prospect of a teaching post is a strong disincentive to leave the country.

While foreign teaching experience theoretically upgrades an individual's qualifications, in practice it probably carries little weight in the rigid procedure governing teaching appointments. It is certainly no guarantee of employment on return to West Germany.

However, ministers have reacted enthusiastically to the idea.

Herr Horst-Werner Frank, the current chairman of the standing conference of regional education ministers (the KMK), welcomed the approach as a contribution both to West German-British co-operation in education and to reducing the high level of teacher unemployment in West Germany.

He proposed an early meeting of senior Department of Education and Science and KMK officials to discuss details.

The DES was clearly surprised when news of the approach was made public by a spokesman for the culture ministers of West Germany's Lander (federal states) last week.

Mr Patten's letter was a response to informal inquiries by the German authorities, who have 20,000 to 30,000 "too many" potential teachers qualified in maths and physics.

The DES says it is looking at a number of possibilities for easing the shortage of maths and physics teachers - and there is nothing concrete suggested for recruitment of teachers from abroad.

Teachers in Britain reacted with predictable anger when they heard that the Government was investigating the possibility of hiring unemployed maths and physics teachers from West Germany.

The row may turn out simply to be a storm in a teacup, but union leaders may instead regard the incident as another example of ministers' insensitivity towards the education service at a time when teachers are complaining of low morale, poor pay and unsatisfactory conditions.

More girls need to be drawn to the shortage subjects of maths and physics, according to the Committee of Vice-Chancellors and Principals.

Changes in attitude from primary school onward would be required to make these subjects attractive to girls.

Haringey demotes churches

by Bert Lodge

Churches in the London Borough of Haringey, which run a quarter of the authority's schools, have been thrown off the education committee by the Labour-controlled council.

The move means that, for the first time in the borough's 21-year history, no Church of England or Roman Catholic representative has been co-opted to the committee.

Instead, the churches have been offered a seat on the smaller and less influential schools sub-committee.

Their rejection follows a move earlier this year to diminish Conservative opposition numbers on the governing boards of church primary schools.

Mr Robert Hall, the local Tory leader, said: "Up to this year, it was custom and practice for governors nominated by the education authority to reflect the political composition of the council. After the May elections, Labour scrapped it. Now we have only two places for the whole of the borough's 22 church primary schools."

An appeal last week by a deputation to the education committee for the restoration of the churches' seat was turned down by eight votes to five. Mrs Sheila Berkery Smith, the leader of the deputation and chairman of Haringey Catholics' deanery pastoral council, said: "This Labour council is anti-church. We are concerned with education from playgrounds and schools right up to adult education courses."

She predicted that a petition of more than 5,500 signatures collected in one morning would finally attract 20,000 names. A second deputation will argue the churches' case before the full council on Monday night.

Although Labour council members refused to talk to *The TES*, it is understood that Mr John Moore, the vice-chairman of the schools' sub-committee, told the deputation that the churches' interests lay mainly with school education and they were therefore more appropriately represented on that sub-committee.

Mr Colin Alves, the general secretary of the Church of England board of education, said he had not heard of any other authority withdrawing the churches' customary representation.

Professional Association of Teachers

WHAT EVERY TEACHER NEEDS TO KNOW

PAT is the most rapidly growing teachers' union in the United Kingdom. Its membership increased by 12,000 in 1985. In 1986, there has been a further increase in membership of several thousands.

PAT was responsible for the referral of the 1985/86 dispute on teachers' pay to ACAS and is committed to establishing professional conditions of service and professional levels of salary.

PAT has shown it is possible to advance teachers' interests without harming pupils' education.

PAT is not allied to any party political group and has parliamentary consultants and advisers in the Conservative, Labour and Alliance sectors. If you wish to join PAT, all you need do is write to the following address (no stamp required):

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Rushmore, Wokingham, RG4 0AA
Derby DE1 1BB

The real debate on the challenges of Mr James Callaghan's Ruskin speech has yet to be held, say leading educational commentators in a review 10 years after.

Successive governments since 1976 failed to attack the real weaknesses in the education system and ended up making the underlying economic problems worse, they write in *Ruskin 10 Years* in Exeter University's *Perspectives* series.

Mr Gordon Hainsworth (chief education officer for Manchester) wants the Manpower Services Commission abolished and replaced by a Ministry of Education with regional boards

including local education authority representatives.

Mr Callaghan, prime minister of the day, criticized I.E.A.s for their inertia and lamented the inability of central government to intervene in the curriculum.

But government policies after the Great Debate only succeeded in undermining the authorities which were supposed to co-operate with proposed curriculum reform and wider training opportunities, says Mr Hainsworth.

Higher education still determines the character of an examination-led secondary school curriculum and, although

the tripartite system has been largely abandoned, schools still retain its curricular implications. He attacks the last two Conservative administrations for failing to draw teachers into the debate.

Most of the educational changes depend on a confident and effective teaching force, yet the Government until very recently has been hostile to teachers, he says.

It expressed a general view about unhelpful teaching and yet its own recommendations were themselves "revelatory." Examination reforms at 16-plus, if anything, "tend to reinforce subject specialism in the secondary curriculum."

None of the changes needed could be implemented without more money, which is urgently needed for the complete retraining of teachers rather than the present piecemeal approach. Mr Maurice Holt, principal lecturer in education at the College of St John, Plymouth, criticises the increasingly vocational nature of the curriculum.

Professor Richard Pring, head of education at the University of Exeter, says some of the "radical" approaches of vocational education are "appalling" and "a narrow, organised work of many evils."

Barry Hugill speculates on the future debate over state-backed inner-city technology colleges...



On the attack: Kenneth Baker

Baker goes for high-risk strategy to put Radice in the cold



In danger of being outflanked: Giles Radice

A month ago Mr Giles Radice, Labour's education spokesman, was in a buoyant mood. Opinion polls were showing that an overwhelming majority of the electorate believed that education standards had worsened since the Conservatives came to power.

The most recent indicated that only six per cent believed that standards had improved under Mrs Thatcher's administration.

He had just published a personal manifesto under the imprint of the Fabian Society, which he had every reason to believe would become the platform on which Labour would fight the general election. And it was a platform that he believed would prove popular with the voters.

Its central theme was the need to invest in schools in order to produce an educated populace that would aid economic recovery and enable Britain

to compete with the likes of West Germany, Japan and the United States with their much superior school staying-on rates. It promised to raise educational standards for all and avowed that Labour, not the Conservatives, was the party of excellence.

It was a modest, muted programme with no rash promises to spend, spend, spend and careful avoidance of anything that could be used as ammunition by the Tories. In particular, the official

Labour policy of phasing out public schools through the removal of charitable status and other tax privileges was mentioned only in passing.

Mr Radice was intent on using the education debate at Labour's Blackpool conference as a vehicle for hitting hard at what he, and the opinion polls, perceive to be the Government's soft underbelly - the increasing dependence of many state schools on cash from parent-teacher association fund-raising.

And that was what he did in his own brief speech to the conference and, much more important, the television audience at home.

Today, Mr Radice is still full of confidence. He says the widely-acclaimed speech by Mr Kenneth Baker, at Bournemouth last week was a sham. It had much more to do with the Education Secretary's desire to be a tenant of Number 10 than with any genuine urge to improve the lot of the nation's children.

Parents will see through the "glimpse" of the city technology colleges and lay the blame for the peeling paint and lack of textbooks at their local schools fairly and squarely on the Government, he believes.

But privately, Mr Radice must be a worried man. If he is not, then he ought to be. Mr Baker has taken a calculated political risk and is quite prepared to see education a major election issue.

When he took over from Sir Keith Joseph in the spring, he told friends that his job was to put out the fires. He had to heal the wounds caused by the long and bitter teachers' pay dispute and soothe parental fears over the consequences of public expenditure cuts.

Now after a mere six months, he feels confident enough to go on the attack.

Mr Baker believes that the CTCs will grip the public's imagination. He anticipates hundreds, thousands, of parents desperately seeking to put little Sean and Sharon's name on the waiting list for a place at one of the new super schools.

He also knows that the colleges, earmarked as they are for inner-city areas controlled by Labour, will not have the easiest of births. There is not a Labour council in the country that will release existing school buildings, and it could prove difficult to get outline planning permission from the same councils for the erection of new buildings.

Imagine, therefore, a situation arising in, say, 10 months' time. The good shopkeepers and building merchants of Hackney have formed a consortium to run the East London CTC and are inviting parents to put forward their children's names for consideration for a place the following September.

There is no shortage of applicants, many of them from black and Asian parents: in steps the Hackney borough council, shortly followed by the Inner London Education Authority, placing all manner of obstacles in their path.

And Mr Radice, or perhaps Mr Knock, appears on television explaining that Labour will scrap the colleges once in power.

It takes little imagination to develop the scenario a little further. Why is Mr Baker willing to scrap the colleges, which Labour is so intent on denying the children of the not-so-well-off the sort of education that the more affluent would gladly pay to have?

How can Labour claim to be the party of equal opportunities when it is blocking his plan to help the children, girls as much as boys, of the less fortunate members of society?

Mr Radice, of course, will have to answer well-prepared. The CTCs do little for 99 per cent of the country's children, he will say, before turning attention to the Conservative record in the maintained sector over the past 10 years.

Mr Baker, however, has another trick up his sleeve and he will not hesitate to use it. We have seen a rehearsal recently. He will play, but he is worth, on the public distrust of the local education authorities - particular Brent, Enfield, Haringey and the ILEA.

For good or for bad, the determination of the Labour leadership in London authorities to combat what they perceive to be the negative image of homosexuals in their schools has given Mr Baker an obvious, and easy, target.

ILEA is digging its own grave, he said last week, a grave which he is enthusiastically helping to dig. Radice must win every time he mentions that of literary trio, Martin and Eric. Plead as he will that Mr Baker is scapegoating local authorities and making cheap political capital out of the anti-gay prejudice of the British public, he knows that the damage is done.

Unless Mr Radice is careful, it could be he, not Mr Baker, who enters the run-up to the general election on the defensive. And it will not really be his fault. For Mr Baker's third weapon will be the resolution overwhelmingly passed, against Mr Radice's wishes, at the Labour Party conference.

To no avail will Mr Radice protest that the resolution which urged Labour to scrap sixth forms and to establish a new party policy, in schools is not official party policy. It is not - but that won't stop Mr Baker.

Mr John Biffen, the leader of the House of Commons, told journalists last week that education was not one of the political agenda. He was wrong. The defence takes pride of place in Mrs Thatcher will ensure that it does to do so. But he was right in one thing: the mark, and education, will figure more prominently in the next election than it ever has before.

In Bournemouth, last week, Mr Baker asked who determined Labour's education policy - Mr Radice or the party? Mr Radice, he said, was the one who asked the question over and over again. It is going to be that sort of campaign.

... while Ian Nash looks at a booklet - published this week - outlining how they will work

Birth of the Tory urban blueprint

Central government will have unprecedented control over the school curriculum in the 20 city technology colleges (CTCs) planned for inner-city areas in England by the end of the decade.

Individual contracts will be drawn up between sponsoring educational trusts and the Department of Education and Science, but negotiations will be limited to the latest in Government educational policy.

Mr Kenneth Baker, Education Secretary, in an appeal for support to the Confederation of British Industry, stressed the feeling among many inner-city children of being undervalued by society and demotivated at school.

"We must create a new appetite for full-time education and training," he said. And his diet is prescribed in detailed curriculum guidelines from the DES this week.

As expected, emphasis will be on the "strong practical element essential for changing adult and working life." Years one to three reflect the principles enshrined in the White Paper *Better Schools* and years four and five are a perfect model of the Technical and Vocational Education Initiative.

The over-16 curriculum offers courses for all abilities leading to the full range of qualifications under the Secondary Examinations Council and the National Council for Vocational Qualifications.

Mr Baker promises "breadth, balance and differentiation," and a bias towards science.

His answer to the inevitable squeeze on the curriculum was to suggest: "The school day and term are likely to be longer than the minimum required by law for local education authority maintained schools."

Mr Fred Jarvis, the general secretary of the National Union of Teachers, confessed this week that he was now "banking after the integrity of Sir Keith Joseph."

Mr Jarvis made the admission to a London rally of the Education Alliance - a pressure group of trade unionists and parents interested in education - after claiming Mr Kenneth Baker's plans to establish 20 inner-city technical colleges were "the first step on the road to privatization" of the education service.

Pupils with an aptitude for a second foreign language or subjects such as music, drama and art may have to take them outside the "normal" working day, he said.

Education for all 11 to 18-year-olds will be free, and CTCs will be registered as independent schools with a pupil roll of about 1,000 from a 5,000-pupil catchment area. It is not Mr Baker's intention, however, that they should "cream off the brightest pupils" by formal academic tests.

But with CTCs taking 15 to 20 per cent of an urban catchment area, i.e. as are concerned that Mr Baker is simply substituting technological aptitude for academic excellence in defining a new elite.

This, at a time of chaotic secondary reorganization in most inner cities, will "scupper" efforts to provide a rich, balanced academic and vocational curriculum for all, the Association of Metropolitan Authorities warned.

Possible locations for the colleges, suggested by the Government, include the most depressed inner-city areas. The immediate response from two of them - St Pauls in Bristol and Chapeltown in Leeds - is to reject the scheme.

Mr Geoff Driver, chairman of Leeds education committee, dismissed the plans as "a blatant attempt to steal the best teachers".

Indeed, the CBI, even following Mr Baker's pep talk, has greeted the scheme with caution. "We will look at his proposals carefully and consult our members closely," was all a CBI spokesman would say.

With an initial estimated capital outlay of £1 million from each promoter, Mr Baker will need all the industrial support he can get - though he is also appealing to the churches, charities and existing educational trusts.

The trusts will be non-profit making but sponsors will have the philanthropic satisfaction of investing in the future of an educated workforce. In addition, Mr Baker has secured £35 to £40 million Treasury funding.

The largest teacher unions have joined local authorities in condemning this proposal as a way of poaching the best teachers by offering more. But, of course, with thousands unemployed, market competition could equally depress salaries.

Only the Professional Association of Teachers has so far given the scheme "a cautious welcome as an interesting experiment".

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Key figures: detail from the brochure's front cover

While studying prehistoric Greece, Dr. John Cherry discovered the computer.

Dr. John Cherry lectures in classical archaeology and the pre-history of Greece at the University of Cambridge. And until he started using an Apple[®] personal computer, this was a truly Herculean labour.

Since standard typewriters and word-processing systems aren't able to produce the icons and letters of either modern or ancient Greece, twice as much work was required. As Dr. Cherry explains, "I had to write all the Greek parts of my notes, business letters and research papers by hand. Then a secretary using a typewriter specially equipped with a golfball of Greek characters would transcribe them."

A crucial tool for teaching.

His Apple Macintosh[™] has now made that ancient history. Using ordinary word-processing software with added Greek fonts, Dr. Cherry can now type directly onto his screen in any one of five ancient and modern Greek fonts, including Mycenaean Linear B script. The Macintosh can then enhance or modify any portion of the text into a wide variety of styles and point sizes.

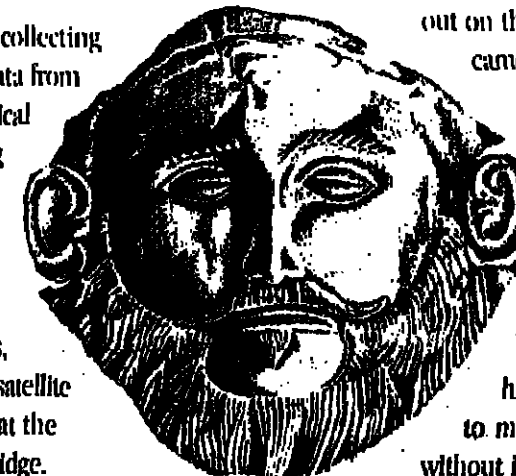
Roman characters can be mixed in, if necessary. And when hard copies are needed, they can be instantly printed out, with faithful reproduction. Dr. Cherry says this system allows him "to do word-processing that would otherwise be impossible."

More than a word-processor.

Utilising the great wealth of commercially-available software, Dr. Cherry's Macintosh can be put to many other tasks. For example, he is currently running a major

field project in Greece, together with colleagues from universities in the USA and Greece.

This involves collecting large amounts of data from various archaeological sites, and recording it in notebooks. The information is later loaded onto a computer at the University of Illinois, then transferred by satellite link to a Macintosh at the University of Cambridge.



A typical entry would describe a particular find together with the date it was recovered, the time of day, the soil conditions, and so on. Dr. Cherry can then analyse these entries at his leisure and transform them into graphical displays.

Dr. Cherry makes quite extensive use of graphics in his archaeological work. "I sometimes use my Macintosh in conjunction with a digitizing pad, on which I can trace map drawings for transfer to the computer." These drawings can then be completed by adding text or other illustrations.

Still more ambitious.

But his Macintosh's greatest task is yet to come. Dr. Cherry has been commissioned to prepare quite an exhaustive catalogue of the many archaeological sites in Crete. When it's finished, this will probably number some 1,000 pages, produced entirely on his computer.

The text and illustrations will be available free of charge from the DES Publications Dispatch Centre, Canon's Park, Stanmore, Middlesex.

composed with the help of advanced page-design software. Then they will be printed out on the Apple LaserWriter[™] as camera-ready artwork.

This method will not only save the costly typesetters' charges, but will enable Dr. Cherry to make corrections instantly, and at minimal cost.

As Dr. Cherry says of his computer, "It's indispensable to my work now I'd be quite lost without it." But obviously, the uses of Apple computers and their myriad software needn't be confined to the Faculty of Classics.

More can be discovered about these uses by attending the AppleWorld exhibition at the Business Design Centre in London from October 29 to November 1. For further information, please post the coupon.

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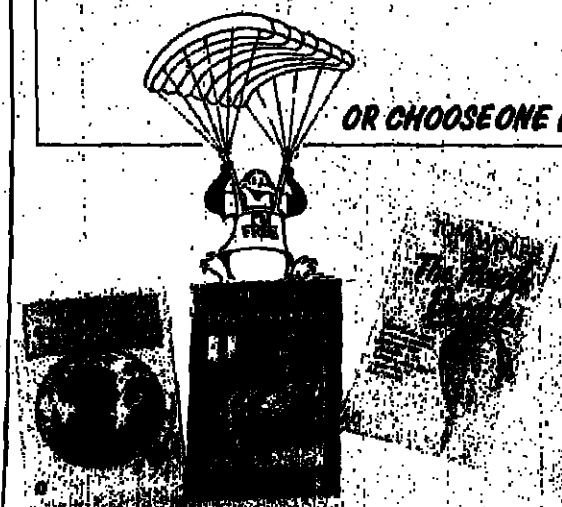
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THE TIMES
Educational Supplement

As Dyslexia Month begins, Sue Surkes reports on the problem in the United Kingdom, while Bill Norris gives details of a treatment breakthrough in the United States

Early diagnosis through computer

A new computerized test, which works by tracking the involuntary eye movements of dyslexic children, is being hailed as a major diagnostic breakthrough.

The brainchild of Dr George Pavlidis at Rutgers University medical school, it has been developed after a two-year study of some 400 children aged from eight to 18. The United States study revealed that dyslexics displayed irregular eye movement which differed significantly and consistently from normal readers.

The importance of the new method, which uses light instead of words, is that children born with dyslexia can be diagnosed well before they attempt to read. And early detection means much easier treatment.

Mr David Gow, headteacher of America's oldest preparatory school for dyslexics, is enthusiastic. Many of his pupils took part in the study. "Now there's no reason why dyslexic kids can't be identified at four or five," he said.

"The brain of a pre-school child is much more plastic and capable of retraining than that of a 14-year-old, which is when we usually start seeing students with problems."

Dyslexic children's difficulties have been exacerbated by the reluctance of many schools to teach reading by the phonic method, the best way of correcting the condition.

The slight recognition and word memorization method, adopted because it is less time-consuming, compounds the problem for dyslexics whose brains rearrange letters and sentences. The result has been that many dyslexic children, through constant academic failure and low self-esteem, develop an aversion to school before they are properly diagnosed.

The equipment for the new test, which is expected to be commercially available within the next 12 months, uses electronic sensors to track the eye's ability to follow sequences of light.

According to Dr Pavlidis, no expert knowledge is needed to conduct the test—all the necessary information is built into the computer. The procedure takes a maximum of 10 minutes, after which the computer gives the main strengths and weaknesses of the child, followed by a brief summary and recommendations for treatment.

When Mr Gow first heard of the test, he was very sceptical. "There's an awful lot of snake oil sold in the education of the learning disabled," he said.

But he changed his mind after seeing the results of the study. "At least 150 of our kids were tested and compared with other dyslexic and non-dyslexic students across the country. Educators who have seen the results think they are statistically very significant."

What it means to be written off as stupid

Edward spent his secondary school years convinced that he was stupid. Fellow pupils taunted him about his poor spelling and slow reading. When he asked to be put in for mathematics O level, staff told him it was "not worth spending the fees for the exam because they knew I would not pass it".

It was not until he was 19 that he first heard the word dyslexia. He was referred for assessment to the Dyslexia Teaching Centre at London's Maria Assumpta Educational and Pastoral Centre where it was found that he had the IQ of an average university student, but had difficulty converting sounds into letters and words.

Edward is part of the 4 per cent of the population estimated to suffer from severe dyslexia—otherwise known as "specific learning difficulties". He is also one of thousands to have been written off as stupid and lazy because schools and local education authorities have been either unable or unwilling to recognize the disorder.

Dyslexia is not an easy disability to get to grips with. Its cause is unknown, although hereditary factors are suspected and it is believed to involve an inability to process symbolic information and internalize the basic yet complex rules of language that most of us take for granted.

Its symptoms vary from difficulties with reading, writing, spelling and arithmetic to problems with memory, sequence and physical direction. Some people still maintain that it does not exist and that dyslexia is nothing more than a middle-class word for slow learning.

Those who do accept it as a specific disability are unequivocal. Dyslexia has nothing to do with intelligence or background and dyslexics are distinguishable by the fact that their literacy skills fall far short of their abilities in other areas.

That specific learning difficulties can be overcome is borne out by countless individuals who have made it to the top of their professions: Albert Einstein, Hans Christian Andersen and, more recently, former defence secretary Michael Heseltine, who is mildly affected, Jackie Stewart, the champion racing driver turned business consultant, is still unable to quote the alphabet or the National Anthem and never writes down his speeches.

But it takes confidence to work around dyslexia and the will to conquer what can become destructive frustration.

It is to raise public awareness about this so-called hidden handicap that Dyslexia Month has been launched. From now until November 7, organizations and groups associated with specific learning difficulties will run a range of publicity events.

The Dyslexia Institute, which has 17 centres across the UK, this week launched a major scheme with the backing of the Manpower Services Commission. From next September, training courses will begin for teachers and seminars for Manpower Services Commission managing agents. Eventually, the institute will set up special courses for school-leavers whose dyslexia has not been recognized at school.

Dr Harry Chasty, the institute's director of studies, said help was now



youngsters. Statements of special educational need—a provision of the 1981 Education Act—had benefited the primary sector most, he said.

Not that either sector has much to boast about. There are only around 2,000 specially-trained teachers and teacher training provision is said to be patchy.

There are some in-service programmes, some college, polytechnic and university courses and schemes run privately by bodies affiliated to the British Dyslexia Association. The BDA itself launched a £700-a-head diploma course earlier this year, but that has yet to get validation from the Council for National Academic Awards and backing from the Department of Education and Science.

"The vast majority of I.e.s. are now aware of the problem and are trying to do something about it," Dr Chasty said. "It's more a question of resources. The DES expects I.e.s. to make bricks without straw."

Some impressive sounding work is being done. Kingston upon Thames has been running a reading centre for 14 years which offers awareness courses for ordinary classroom teachers and one-to-one tuition for dyslexic pupils.

Hampshire has just completed a two-year in-service programme which aimed to give one in every four county primary teachers a basic grounding in literacy problems. Mrs Gill Tester, advisor for special education in ordinary schools, stressed: "It is possible for any teacher who wants to become expert in specific learning difficulties to do so in Hampshire."

For the BDA, however, progress is too slow. As part of an ambitious 15-year programme, the association wants to see I.e.s. lay on short courses for 50,000 ordinary classroom teachers and day awareness programmes for 250,000 I.e.s. officers, governors and others involved in the educational process. More importantly, it wants 10,000 teachers to pass through its



At Fabry House (above), dyslexic children are helped with a simultaneous oral spelling exercise. From top: Albert Einstein, Hans Christian Andersen, Michael Heseltine, and Jackie Stewart have shown that specific learning difficulties can be overcome

one-year diploma course or an equivalent and is hoping to provide bursary help for 1,500. Around £200,000 has already been raised and 150 teachers have received financial support.

"We are not puranoid parents pushing a specialized minority issue," said Mr Tony Davies, chairman of the BDA. "Our concern is that hidden difficulties do not get the same emphasis as, say, physical disabilities."

In an attempt to set the state sector wheels in motion, the BDA invited representatives of every I.e.s. in the country to a reception at the House of Lords earlier this week to hear its case. On November 7, it will host a grand ball at the Café Royal to raise money towards the £500,000 bursary target.

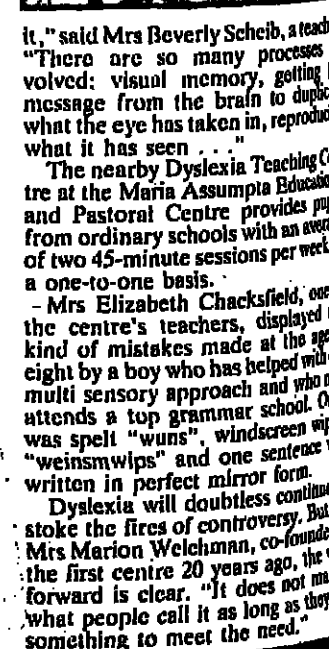
But if, and perhaps because provision is variable in the public arena, it is thriving in the private one among corporate member bodies of the BDA.

Fabry House school in London's Kensington, for example, provides intensive and individually tailored teaching for 65 children aged 5 to 12, a third of whom are paid for by I.e.s.s.

Pupils stay for two years on average, pursuing a regular, full-time curriculum but benefiting from literacy programmes designed by a highly trained, multidisciplinary staff team. The approach is systematic and multisensory.

Children might skip to rhythm over large cardboard cut-outs of vowels, sounding the letters out as they go along. The aim is to develop their strong perceptual areas while encouraging and supporting their weaker ones. Confidence-building is paramount.

"It is no good putting a blackboard full of work and getting them to copy



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At Fabry House (above), dyslexic children are helped with a simultaneous oral spelling exercise. From top: Albert Einstein, Hans Christian Andersen, Michael Heseltine, and Jackie Stewart have shown that specific learning difficulties can be overcome

SCHOOL TO WORK

Mark Jackson on two surveys that show success in the job hunt does depend on better school work

The short step from truancy to dole queue

New evidence from major Government surveys published this week strongly underlines the links between performance at school and employment. The surveys show that keeping, as well as getting, a job is related to regular attendance and exam results.

The latest analysis of the Department of Employment's annual labour force survey sets out the duration of unemployment as well as the bare unemployment rate for people at each level of academic qualification.

The Manpower Services Commission, which published the analysis, says the figures make it clear that the better people are qualified, the less likely they are to be unemployed.

It points out, too, that among those who become unemployed, the proportion who fail to get jobs within a year is much smaller among those with qualifications.

This relationship between educational achievement and employment

has long been assumed to exist, but some doubt has been cast on the assumption by other recent research commissioned by the Department which suggested that changes in the economy may have greatly reduced the importance of educational achievement in comparison with other factors.

At first sight, the labour force survey figures – set out in the table – do not appear entirely to support the MSC conclusions. They might be taken to suggest, for instance, that serving an apprenticeship is likely to lead to long unemployment, since more than a third of the apprentice-trained unemployed have been out of work for more than two years, while among those who have only CSE, the figure is a quarter.

The table shows that, even among those unemployed with A levels or their equivalent, the proportion out of work for more than two years is nearly

25 per cent. But the survey covered the workless of all ages (including those who do not show up in the monthly unemployment figures because they do not claim benefit). And, while the A level group includes those older people who took qualifications that A level has since replaced, that group consists entirely of comparatively young people, less likely to be on the scrap heap than the old.

Similarly, the apprentice group contains a large number of older craftsmen whose trades have become redundant. The survey points out that the chances of remaining unemployed for a year or more are much lower for the 20-29 age group than for those between 30 and 34, although the differences are less marked in the North than in the South-East.

The most striking figures are for those who have left school with no qualifications and have not served an apprenticeship: they appear to confirm

that comparatively small numbers of this group are unemployed while they are eligible for the YTS, but that long term unemployment is much more likely for older people in this category than for anyone with qualifications.

The survey calculates that the total number of under-25s who have been seeking work for more than a year is 378,000 – about 10 per cent more than the official figure, which counts only those who claim benefit. A link between fifth-year truancy and subsequent unemployment has been identified by the team carrying out the Youth Cohort Study, the Government-backed programme of research among 16-19 year olds which has been following the experiences of 8,000 youngsters who reached leaving age in 1984.

In the MSC's current quarterly report on the labour market the researchers – from Social and Community Planning Research and Sheffield University education department, and funded by the MSC and the Departments of Education and Science and of Employment – say that about half the youngsters in the survey admitted having played truant. But while two-thirds had only skipped the odd day or lesson, the 15 per cent who were unemployed a year after leaving school had been the most regular truants, and almost one in five of them said they had stayed away for days or weeks at a time.

The group who joined YTS contained fewer former truants than were among the youngsters who had not got jobs. The lowest incidence of truancy, not surprisingly, was among those who stayed on in full-time education.

At the time of questioning, a year after reaching school leaving age, four out of five of the youngsters – including a majority of the unemployed – believed they had been right about whether to stay on. Only one in six thought they had got it wrong.

Most of the young people at that point had very mixed feelings about the usefulness of their last two years of compulsory schooling. Just over half thought that it had helped make them confident about reaching decisions, but at the same time nearly 60 per cent



Footloose: regular school absentees suffer in the job stakes

complained that it had done little to prepare them for life beyond school. The proportion who said they had been taught things which would be useful in a job was 55 per cent. As might, again, be expected, those who stayed on were much more likely to value their earlier schooling, while the unemployed took the more jaundiced view. But even among the jobless, less than a quarter saw those last two years in education as a waste of their time, a view taken by one in 10 of the whole sample.

The researchers are puzzled by the number of youngsters who reported having had little or no contact with the careers service. Nearly six out of 10 said they had not been given advice by the service on whether or not to leave school, and three-quarters of those who were unemployed said they had not been given any advice at all by careers officers.

Just over 40 per cent of all those who had left said the service had arranged YTS interviews for them, and one in six had got job interviews fixed for them.

YOP's old ghost hovers over new Young offer

The Government's plan to offer work experience to the long-term unemployed, announced at last week's Tory conference, has yet to win the approval of the Manpower Services Commissioners. There is some doubt that they will agree to run it on the terms put up by their officials.

Under the scheme, which is aimed mainly at under-25s, people unemployed for more than six months would be given a 26 week work placement to include some off-the-job training. After that, even if they returned to the dole, they would no longer count as long-term unemployed.

Lord Young's decision to make the announcement at a party conference has not enhanced the credibility of a scheme which appears to break away sharply from the MSC's Government-backed Adult Training Strategy. The strategy concentrates training resources on those already in work, and recently the Employment Secretary forced the Commission to drop training from the Community Enterprise Programme for the unemployed. In order to switch the money it cost to the Adult Training Strategy.

But there are more specific worries on both sides of industry, as well as among the voluntary agencies working with the unemployed. The TUC commissioners suspect that the scheme is an attempt to offer an adult version of the late Youth Opportunities Programme, in circumstances that increase the danger of exploitation and job substitution that bedevilled YOP. Adults, most of whom will already have some experience of work, are far more easily used to replace paid unskilled workers than were YOP's school leavers.



Lord Young: credibility gap

The TUC representatives, and almost certainly the local authority members of the Commission, will want to look closely at the training provision and the proposed obligations on employers. And they will argue that the trainees should be paid a proper training allowance rather than be expected to work for a sum equivalent to the benefit that they would get anyway.

The CBI, too, which was not consulted about the terms on which employers will be expected to co-operate, will want to know exactly what they are to be asked to provide for the CBI, month grant offered them. The CBI, which believes that the Government has been remarkably fortunate in getting employers to fund a substantial part of the Youth Training Scheme's cost, is very sensitive towards any attempt to get them to take on further burdens.

Edited by Mark Jackson

PRIMARY

Welsh parents in fear of second tip tragedy

by Iola Smith



Stringing along: after six years as head of East Farnham county primary school in Kent, Mr Mike Fenton is humming a new tune and changing his career.

At the age of 38, he is settling off with his wife, two children and an autoharp to Worcester. There, he will advertise his services as a provider of autoharp concerts and workshops for primary schoolchildren.

The autoharp is a kind of automated zither invented in Philadelphia in 1818. Its advantage for young children is that it is easy to play and produces a tuneful melody by the player pressing on an automatic chord bar.

Mr Fenton says that half of England's primary schools have autoharps, which are lying in store cupboards because no one knows how to play them. And if too few people want to learn, his wife is prepared to take up a part-time teaching job to help the family finances.

How the N.E.S. has sharpened up nursing recruitment

At the moment, most people who want to train for a nursing career apply to more than one school of nursing.

Which involves a string of references for each one and a pile of unnecessary paperwork.

But now the red tape and wasted effort will be cut out thanks to a new organisation managed by the English National Board for Nursing, Midwifery and Health Visiting. It's called the Nurses' Central Clearing House.

Nurses-to-be wishing to commence their training after 1 September, 1987 should now apply to the NCCH. (For earlier courses they should apply direct to the colleges of their choice, as they do at present.)

Like the university system, UCCA, the NCCH will then co-ordinate applications to the candidates' six preferred schools in England. And, after their interviews, successful applicants will only be allowed to hold one place.

If their choices prove unsuccessful, they go into a 'pool' from which unallocated places can be filled.

The nursing courses shown can be taken all year round, so we'll be operating all year round.

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The factory was rejected by the authority on safety grounds, while the £100,000 needed for temporary buildings was considered excessive.

Instead, the authority suggested either moving all pupils to the former Pentre grammar school building, or dividing the school and moving infants and juniors to separate schools in other parts of the valley. Both parents and teachers opposed splitting the school, voting for the Pentre option by two to one.

According to Mr Hopkins, however, that site has an obsolete, 30-year-old

boiler which could result in a heating breakdown. The school is also almost inaccessible to transport, he said.

On Monday, parents were balloted to confirm the decision to move, but many seemed to have changed their minds after further confirmation of the tip's safety by an engineer's report. Instead, they voted two to one to stay at Gelli.

This leaves 50 parents unsatisfied with the decision and they will continue to keep their children at home.

schools of nursing in England and their entry requirements. They also receive the single application form needed to enter the Clearing House system.

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Comprehensive Registered General Nurse and Registered Sick Children's Nurse RGN/RSCN. This course has been running in the system since 1 November 1985 and anyone wishing to apply for this course commencing from September 1986 onwards may apply at any time through NCCH.

Careers advisers and teachers can obtain their copy of the handbook for just £3.00. It will also be made available through libraries, schools and job centres.

We should point out that, although the way into a nursing career has been made much simpler, the career itself demands as much dedication, determination and understanding as it ever did.

The application is less painful, but the applicants will have to be just as sharp.

Our address is: NCCH, P.O. Box 346, Bristol BS99 7FB.

Nursing

TES

Next Week

Grade Expectations

'A' LEVEL - ARE ITS DAYS NUMBERED?

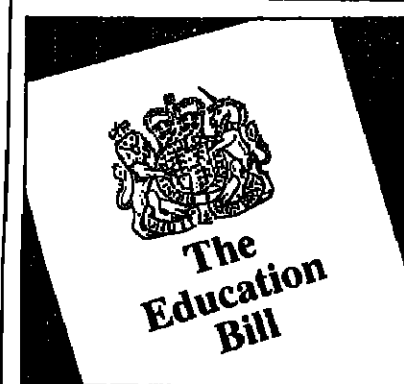
As 'O' level disappears into the GCSE, and 'AS' levels promise broader studies, will the sixth form as we know it soon be a thing of the past?

The demands for more practical education could soon put an end to early specialisation and advanced academic study in schools – a prospect that was once seen as threatening the standards of higher education. Now many university dons seem to regard it as inevitable.

THE TIMES
Educational Supplement

AT NEWSAGENTS
IN YOUR AREA
NEXT FRIDAY

NEWS



The Education Bill will receive its third and final reading in the House of Commons on Tuesday. The proposed legislation was originally intended to clarify and redefine the composition of governing bodies and the complex relationship between headteachers, governors and local education authorities in running schools and colleges. But new clauses added to the Bill in the House of Lords or introduced by the Government at the Committee Stage in the Commons have widened its scope considerably. Tuesday's debate is expected to revolve around a number of key issues:

- The Government will be tabling an amendment giving governors the power to determine if, and how, sex education should be taught. What they will not be able to do is control the biology syllabus. Right-wing conservative MPs will be arguing that

KEY ISSUES FINALIZED

parents should be allowed to withdraw their children from sex education lessons.

- The Bill will place an obligation on university and polytechnic heads to draw up codes of practice to guarantee free speech on campuses.

The issue is very much alive as Mr David Selbourne, a politics lecturer from Ruskin College, Oxford is involved in a much-publicized dispute

with his employers for their alleged refusal to safeguard his academic freedom. He has been faced with a boycott of his lectures after publishing an article in *The Times*. Mr Selbourne was accused by the college governors of bringing Ruskin into disrepute by writing for a News International newspaper.

- The Bill contains a clause, inserted after an energetic campaign by Baroness Cox, banning "partisan political activity" among teachers or pupils in primary schools.
- The proposed legislation places a duty on school governing bodies to "have regard to" participation of members of the business community - a retreat from an earlier position obliging governors to co-opt.

Patricia Rowan talks to Mrs Angela Rumbold, the minister who has to steer the legislation through the Commons, about her vision for the future, while Barry Hugill witnesses a Tory fringe crusade

Woman with a mission Onward... Christian soldiers of the Right

When the House of Commons reassembles next Tuesday, Mrs Angela Rumbold will not only make her first appearance there in her new job as Minister of State for Education, but will be pitched headlong into one of the trickiest jobs on the Government's current agenda.

It was kindly suggested to Mrs Rumbold that, in the circumstances, she might prefer to let someone else see the booby-trapped Education Bill through its final fire-cracker stage in the Commons.

Characteristically, she refused. She had taken over Chris Patten's responsibilities. Why should there be any question of handing over the most immediately demanding (and high profile) of them to either her boss, the Secretary of State, or her competitive junior, Bob Dunn?

Since her appointment in September, Mrs Rumbold has not been slow to unpeel some of the labels stuck on her by back-benchers and commentators who assumed - without too close a look at the evidence - that she was to be the hard-right balance to Kenneth Baker's allegedly softer tendencies.

That evidence was to be found easily enough in her local government record, both as chairman of Kingston's education committee and especially as chairman of the Council of Local Education Authorities, where six years ago she was a most forthright

voice for local education services, whether or not her views coincided exactly with those of her own Government.

Her recent speech on appraisal to local advisers and inspectors demonstrated, if that were needed, that she has lost none of her spirit, common sense, and intimate knowledge of how the education service actually works.

Angela Rumbold will need all those attributes with knobs on in the House of Commons on Tuesday, even if it is a matter of presenting a strategy largely master-minded and unveiled at the Conservative Party conference by Kenneth Baker. Fortunately her views largely coincide with Baker's own on the sex education imbroglio.

Genuinely shocked by a sight of *Jenny Lives With Eric and Martin* on the one hand (and shrewdly aware that a public expression of that shock was worthwhile, whatever its legal relevance), she was dismayed, on the other, that the original House of Lords sex education amendment ever saw the light of day - never mind the pesky Peter Bruinvels follow-up.

Since Mrs Rumbold has more practical knowledge of how school governing bodies work than most members of the Government or her own department, she may well have reservations about how the plans to give them unprecedented powers over sex education lessons can be worked out in practice.

She has indeed admitted misgivings about some of the Bill's clauses, already passed beyond recall, about the powers and composition of governing bodies. It could well be that she will seek, for example, to have clearer guidelines about co-options produced, or work on ways to provide the training and back-up governors will need to take on their new load.

The Bill apart, a critical question for Angela Rumbold could be how far she still believes in local government. Could her background experience put her out of step with the centralizing, privatizing spirit of the rest of the team?

She is vehemently indignant about rumours of vouchers or the return of grammar schools: "Why should we want to look back? Vouchers were tried by my colleagues in Kent and they didn't work, and you certainly couldn't combine them with taking empty school places out of use. Selection is a dead issue now. We should be

looking for good new ideas, not trying to revive old ones."

Mrs Rumbold's own pet scheme for the future is a variation on the "centres of excellence" proposal, currently being slanted towards technology.

It is, however, very much in line with blueprints which HMI have produced of model schools, both primary and secondary. These like the first three years of the CTCs, would have a common curriculum, broad, balanced and providing an exemplar of what could be done if only the advice in *Better Schools and Curriculum 5 to 16* were followed to the letter, instead of neglected by those troublesome I.E.A.s.

There would be no need for selection because, again as in the CTCs curriculum would be differentiated to allow for different ability levels. The curriculum would be dominated by traditional subjects, without too much room for suspect items like personal and social development on the formal timetable, though Mrs Rumbold firmly believes that the ethos of the school should provide preparation for coping

with life's problems.

Where the Rumbold version differs is that she particularly wants her model schools to provide firmer links between primary and secondary stages, and she would like to see this done by a stronger emphasis on subjects in the crucial years from eight to twelve.

"I'd like to see more done to help children through that difficult transition period. And there is no reason why subject teaching shouldn't start at eight. Most children are quite ready for it then."

She would like to see the next wave of centres of excellence extended into the counties, and to bring some local authorities in on the scheme. (Perhaps they should be called direct grants?)

She is only too aware that there won't be much time even to start to translate this longer-term dream into action before the election, unless the Prime Minister hangs on until 1988. But a more critical question might be whether those lingering local government instincts could put her out of step while partnership is out of fashion. Meanwhile, Tuesday's test awaits.

"Minority groups have elevated their particular problems to 'normal' status and the State by means of cash benefits is encouraging the spread of abnormality and perversity."

For "abnormality" read homosexuality and appreciate that "cash benefits" refers, in part, to the allowance paid to single mothers and you are some way to understanding what motivates the authors of the above sentence.

It is taken from the statement of aims of the Conservative Family Campaign, the organization masterminding the campaign to allow parents the right to withdraw their children from sex education lessons.

A leading member of the CFC is Mr Peter Bruinvels, the Conservative MP for Leicester East, who has tabled an amendment to the Education Bill, due to receive its third, and final, reading in the House of Commons next week, demanding that parents be given that right of withdrawal.

It was another CFC sponsor, the Viscount Buckmaster, who forced through the House of Lords earlier this year, much to the chagrin of the Government, a clause to the Bill which will enshrine in law the principle that sex education, where taught, must be within the context of stable family life and emphasize marriage and fidelity.

Last week at the Conservative Party conference in Bournemouth the CFC held a well-attended fringe meeting. A meeting that began with a prayer because above all else the CFC is a Christian organization. Membership is open only to members of the Conservative Party who are Christians.

It is an organization that has been likened to the American "moral majority" - the bedrock of President Reagan's support - and in some respects the comparison is a valid one. Certainly the audience at last week's meeting was exclusively white, middle class and, of course, Christian. And politically it stood well to the right of centre.

The language used by both platform speakers and members of the audience would have been recognizable to any theme throughout the many speeches and contributions from the floor was the belief, sometimes stated, sometimes not, that there exists a left-wing

conspiracy to undermine the moral values of society as a precursor to a socialist take-over.

A conspiracy aided by a significant number of teachers who are, in the words of one member, "fostering a way to corrupt children."

The attack on family life is a tactic of those who wish to subvert society, states the CFC statement of aims, because "the family is the basic building block of society and where the family is strong the nation is strong."

And one way of undermining the family, says the CFC, is through immoral sex education which presents homosexuality as "normal", encourages young girls to take the pill and to view sex as something acceptable outside married life, condones abortion and creates a moral climate in which promiscuity is seen as perfectly acceptable.

It was the conviction that much sex education is subversive that led Viscount Buckmaster to force through his

'Any teacher who used a banned book would be sacked'

clause in the Bill stressing the importance of family life. But neither he, nor his colleagues in the CFC, believe that the clause is strong enough to protect children from teachers sympathetic to homosexuality and scornful of the family. Thus the attempt of Mr Bruinvels to amend the Bill to give parents the right of withdrawal and his moving of another amendment which would, if accepted by the House, force the Education Secretary to draw up a list of proscribed books for use in sex education lessons.

Mr Bruinvels' distrust of some teachers is quite clear: "Any teacher who used a book on the banned list would be sacked and prohibited from ever teaching in that local authority if my amendment is successful. In addition the education authority itself would be liable to prosecution for corrupting the morals of children," he explained.

Whatever the eventual shape of the Bill, he - and his supporters in the CFC - will battle on against what they see as subversion and perversion in our schools.



Mr Peter Bruinvels

NEWS

TES reporters visit schools to see how sex education is being carried out

Teaching more than the facts of life

Very few parents with children at Heathcote comprehensive school in Stevenage are likely to want new legislation allowing them to exclude their offspring from sex education classes.

The school - whose work has been praised by the Family Planning Association - informed all its parents of the proposed course and invited them to inspect materials and talk to teachers. None of them objected and some parents even expressed relief that the responsibility for sex education was being removed from them.

Mr Ken Walsh, head of the 840-pupil Hertfordshire school, said: "Sex

education should be kept within the education framework. I regard it as an essential part of the social and educational programme."

He said that the Education Secretary's proposals - whereby governors could vet the sex education curriculum and allow parents the right to withdraw their children from classes - were "irrelevant at Heathcote."

Lynn Gale, a deputy head at Heathcote and a member of the FPA executive, stressed that sex education could not be taught without proper training.

She hoped the Government would recognize this and provide the money necessary to organize training schemes

throughout the country. Mr Walsh added a note of caution saying: "There are contrasting needs in different areas. What is suitable in one school is not in another. We have a very stable low-key approach here which would be inappropriate at a more volatile school with extreme problems."

When Mr Walsh decided to run a sex education course two years ago, he organized a teacher training programme of six sessions with the FPA's help. Sally Morrison, an RE teacher, was one of the eight staff members who attended. She described how they experienced the same learning process that they would later expect of

their pupils. Teachers were asked to examine their own values and how they related to each other and to the society in which they lived. "It is such a different approach," Mrs Morrison said. "Basically teachers have to learn as much as the children."

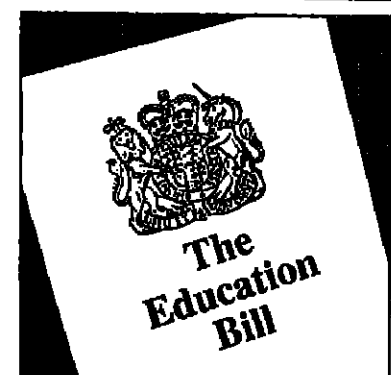
Teaching materials include the Longman *It's Your Life* series, and an Australian book, *Taught or Caught*, on teaching methods.

However, Sally Morrison emphasized that group work and discussion played a far greater role than resources.

Sex education at Heathcote is set within the wider framework of the school's social and personal development programme. Mr Walsh insists sex education should not stand alone or simply be part of a transmission of scientific facts. The course, therefore, encompasses religious beliefs, peer group relationships and the place of the family in different cultures.

It was decided to adopt the outline of the Joint Matriculation Board's integrated humanities course, which is part of the core curriculum for 14 to 16-year-olds. In this way the sex education elements were seen as a natural part of learning.

The school is particularly proud of the course's breadth, but cautious of specific aspects. According to Mr Walsh, when it comes to the hard core of sex education the teachers lack



confidence. "We are at the beginning. We are not experts yet," he said.

As a result, officials from the area health authority have been asked to deal with questions about intercourse, contraception and sexually transmitted diseases. Homosexuality and lesbianism are not specifically covered, although open discussion in any of these areas is not discouraged.

Sex education lessons are taught to mixed groups of about 20 children. Most pupils were keen to avoid segregation, but the option of single-sex groups remains.

The programme of four lessons a week runs for a term with only the final month concentrating on the purely sex related problems.

Mr Walsh admits that the course needs developing. "We haven't got it right yet," he said. Changes are being discussed which he hopes to incorporate in next year's curriculum.

More information on Aids and facts about homosexual relationships are being considered for inclusion.

Hilary Tagg

How Baker's dual role affects the 'moral framework'

If you believe Mr Michael Marland, the head of London's biggest comprehensive school, there are two Kenneth Bakers.

One is the author of the DES draft circular on sex education, issued in August, which calls on every school to have a policy on sex education. The other is the new champion of the Conservative Party faithful's distrust of sex education.

"The Kenneth Baker of the DES circular is not the Kenneth Baker of the Conservative Party conference. His circular is a perceptive, humane and intelligent piece of leadership. When he spoke to the conference he suppressed that and showed himself to be narrow-minded."

There is, according to Mr Marland, head of the massive 1,756-pupil North Westminster Community School, nothing wrong with discussing sex in a "moral framework" - as demanded by the circular - or consulting parents about the thorny issues of sex in the curriculum. What worries him is the way the phrase "within a moral framework" may be twisted to mean "Stop the things I don't like."

He is bemused that the Secretary of State, having recommended in the circular that homosexuality was a proper subject for debate in schools, should grab a standing ovation partly by attacking councils which teach it.

The way in which sex education has suddenly become a political football is bound to make its development in the schools still more difficult. Many schools still teach little or nothing about sexuality beyond the basics of childbirth and child-rearing.

"Yet North Westminster school has taught the subject comprehensively for four years without complaint. It is one of scores of schools where sex lessons have been developed in consultation with, and recommended by, the Family Planning Association. But despite backing from such a reputable body, it is easy to find controversy in the things children are taught."

Mr Marland continued to take sex education until the age of 16. It is the only way that parents need curriculum (one of 14 main syllabuses,

itself divided into five main themes). Sex education is discussed under Personal Living Patterns.

While the amount of time devoted to sex education is small, its importance is indicated by the school's stated aim, set out in a curriculum policy document under the personal living heading: "To help children to enjoy life, and to cope with the day to day problems and challenges of their present living standards, and to prepare them for their future roles in a variety of possible patterns."

The personal living section is itself divided into four topics, including child-rearing and childbirth.

Under the third topic, family and home life, children discuss family patterns in different cultures (nuclear, one-parent, childless couples). They look at roles within the family, sexual stereotyping, parental authority, control and guidance. But they also look at the much wider role of running a family, discussing family finance, looking after the home, and paying bills.

But the nuts-and-bolts aspects of sex, plus the more controversial questions, are discussed under the fourth category, sexual relationships. Here pupils learn about the physical and emotional sides of sex, and about mutual respect and responsibility. They discuss the different feelings and responses of men and women, the sexual pressures exerted by partners, and rape.

Apart from discussing sex in the context of marriage, the now politically sensitive subjects of homosexuality, sex changes, extra-marital sex, prostitution, pornography and child abuse are also discussed. So are pregnancy testing and abortion, the age of consent (including pupil-parents), frigidity and impotence, and sexually-transmitted diseases.

Mr Marland gets annoyed when politicians lambast the Inner London Education Authority's policies on sex education. "I assure the Secretary of State that the curriculum statement we have has not come from the ILEA. If a parent complains, I take the rap, and if I make a mistake I do not turn to the ILEA to defend me," he said.

Jeremy Outcliffe

THE ACTION BANK THE ACTION BANK THE ACTION BANK

How six schools found ways of helping their communities and helped themselves to £6,000

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Oldfields Hall Middle School (Uttoxeter, Staffordshire);
South East Essex Sixth Form College (Benfleet, Essex).

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THE ACTION BANK THE ACTION BANK THE ACTION BANK

Double dose of parental support

by Diane Spencer

Evidence from two separate studies shows that the overwhelming majority of parents want schools to teach sex education.

One carried out by the independent research organization, the Policy Studies Institute, among 200 families with teenage children, found that 96 per cent of parents and 95 per cent of 14 to 16-year-olds thought that schools should provide sex education.

The Institute has sent a briefing paper on the results of its survey to all MPs in time for the debate in the House of Commons on the sex education clause in the Education Bill next Tuesday.

Another study, carried out by the health education unit at Exeter University, found that nearly three-quarters

of parents of eight to 14-year-olds of the 16,000 questioned said they wanted their children taught about human reproduction, conception, pregnancy and birth.

The Exeter study also showed that more than one-third of local primary school children wanted their subjects on the timetable. The Institute survey found that 27 per cent of the parents interviewed preferred the school to take sole responsibility for all aspects of sex education and personal relationships.

Although most parents and children interviewed by the PSI had close and loving relationships with one another, the study found that they frequently found it difficult to talk about sex. Parents did not see themselves as

good sex educators because they were too shy, embarrassed or did not know how to express themselves. And most of them were highly critical of the complete inadequacy of their own sex education.

The Family Planning Association added its support for sex education in its 54th annual report published today. Dr John Dunwoody, the FPA chairman, said: "Although the vocal minority still rages against the provision of sex education, it is abundantly clear from all the research - which has been with every year - that children want and need guidance on sex and personal relationships and that parents want their children to receive sex education at school."

NEWS

Absolute views leave no room for other ideas, says inspector

Religious chiefs 'never accept' multi-faith way

by Bert Lodge

Religious leaders and sincerely committed parents never really accept multi-faith education, a conference of heads and RE teachers has heard.

Mr Ralph Gower, an RE inspector for the Inner London Education Authority, told his audience in Southall, West London where Sikhs form the largest ethnic group: "Where religion is involved, then claims to absolute truths are involved - and these allow no room for many other truths."

He felt parents were anxious that RE should not destroy their children's faith. They knew that when children were in a minority, they faced pressure from the rest of the class. Yet some people disputed the right of parents to bring children up in a particular faith.

Mr Gower told the conference, arranged by Ealing Community Relations Council and the local head-teachers' association, that the Christian claim for Jesus was "the way, the truth and the life", together with the Muslim belief that Muhammad was the final revelation of God, left no room

for alternative truths. Because of the 'absolute truth' claims, it is sometimes not right to deal with things in class in an open, descriptive way.

The confidence of religious leaders and parents could be gained, however. They should be freely supplied with copies of the syllabus for themselves. "In the next 12 months, the Inner London syllabus will be translated into eight languages."

It was necessary to emphasize in the syllabus that it did not set out to destroy children's own faith but to reinforce it.

It was also important for the syllabus to contain features easily recognizable from particular faiths so that the parents could readily identify with them.

Mr Gower estimated that as many as 40 per cent of the RE teachers in LEAs were not committed to a particular religion, yet they were among his best teachers. "They are committed to RE teaching," he said.

Staff come under fire for conservative style

Religious education teachers and church schools have been criticized by the chief inspector of the country's largest education authority.

Dr David Hargreaves, chief inspector of the Inner London Education Authority, writes in a book published last week that research indicates the capital's pupils consider religious education the least useful and most boring subject.

Religious education teachers are conservative and afraid of change, he says. "Many cling to their (usually small) examination classes among older pupils and lose sight of the needs of other pupils."

The essay in *Faith for the Future*, suggests that as the curriculum becomes more modular, RE should enter an alliance with arts and humanities.

There are particularly strong links between RE and personal and social

education, Dr Hargreaves points out. However, church schools have a poor record in showing how imaginatively designed RE can take the lead in creating a coherent curriculum.

He recognizes the great demands on RE teachers and adds that many in the LEA are not adequately trained to teach the new multi-faith syllabus.

Faith for the Future marks the 175th anniversary of the National Society, founded in 1811 "for promoting the education of the poor in the principles of the established church throughout England and Wales." It now works closely with the Church of England board of education.

Faith for the Future, edited by Graham Leonard, Bishop of London, Church House Publishing, Dean's Yard, London SW1, £4.95

DES set to consult on community languages

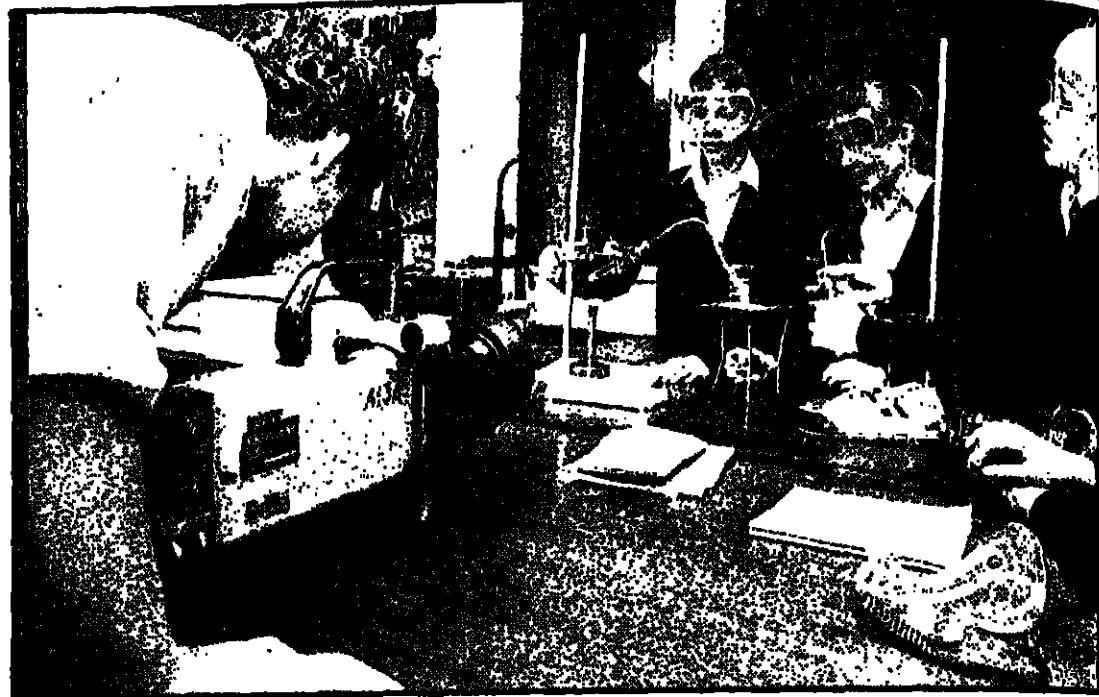
by Sue Surkes

The Department of Education and Science is understood to be preparing a document on community languages which will be put out for consultation at the end of this year.

Community Languages in the Secondary Curriculum will look at the language of any ethnic minority settled in the UK whose mother tongue is not English: Greek and Italian, for example, are likely to be included.

It follows the draft policy statement, *Foreign Languages in the School Curriculum*, issued earlier this year, and considers the principles of teaching community languages rather than specific language requirements.

Professor Christopher Brumfit of Southampton University's department of education has called on schools, local authorities and the DES to meet a minimum requirement for all pupils in the development of a language policy. He outlined the components of such a 'manifesto' to a conference on lan-



Reel appeal: pupils and staff at Altwood comprehensive in Maidenhead, Berkshire, have produced a video to illustrate exactly why their school should not be closed despite falling rolls. *Nobody Does It Better*, which is being sent to the Secretary of State, Mr Kenneth Baker, looks at the full range of activities and facilities the school offers, and makes strong appeal for its survival.

Businessmen support variation on vouchers

by Mark Jackson

A strategy for the privatization of education has been put forward by the Institute of Directors, the right-wing businessmen's association.

The strategy, set out in a *Business Leaders' Manifesto*, centres on the introduction of education credits for parents to use in part payment of fees in the private sector. The scheme is a variation on the proposal for education vouchers, which has been rejected by a succession of Tory ministers.

The institute suggests that the Government should begin by publicizing the per-capita cost of education in order to "give parents a measure of the amount of state finance allocated to their children's education."

This would not only facilitate the eventual removal of education spending from the rates, but would allow the introduction of education credits as a further step.

The institute says that, as a first



Stuart Sexton: private plan

stage, parents would be offered the choice between a place at a state school and receiving a credit at the national per-capita level which they could use towards buying a place at a fee-charging school.

Local authorities would also be able to fund spending above the per-capita level through the rates.

It is envisaged that, in the end, all parents might be given credits automatically and that this would "genuinely privatize education spending."

The institute argues that what it is proposing would be fairer than continuing to make some parents pay twice for their children's education, while denying others effective market choice.

It says that, if the change added too much to public spending, the tax system could be used to claw back some of the money from the parents concerned.

The manifesto is the work of the institute's policy unit, which drew heavily on the advice of Mr Stuart Sexton, one-time adviser to Sir Keith Joseph, when he was Education Secretary. Mr Sexton was unable to convince Sir Keith that his ideas for a voucher or credit scheme were workable.

A spokesman for the Confederation of British Industry, the principal voice of employers, said this week that it had not discussed any proposals of this kind, and took no view on the matter.

Teenagers shun health food craze

by Jeremy Sutcliffe

Teenagers over the age of 16 believe healthy eating is predominantly a middle-class, middle-aged preoccupation, according to a new study.

The study also shows that teenage girls greatly fear physical attacks and Aids, while boys regard them as other people's concerns.

Based on research carried out by eight discussion groups, the study, the second in a series on health by Jones Rhodes Associates of Nottingham.

A follow-up study of a previous group, which examines how concerns and outlook change, shows that many people with young families diet and health are major concerns.

"The fall in value of student grants has meant students now spend up to 80 per cent less on food, according to the National Union of Students."

Union researchers have drawn up a recommended diet based on Department of Health and Social Security guidelines and have put the price at £15.47 a week. The survey shows students spend £9.50 on average.

Vegetarian diet 'liked'

by Hilary Targ

School children in Oxfordshire favour a healthier diet, the results of a survey have shown.

The survey, carried out by *Vegetarian Food Brokers*, tested reaction to a new catering product called *Vegetarian Menu* and was tried out in a variety of institutions.

Veggie Menu is a combination of various natural dried ingredients used in different recipes. Of the 66 children aged between seven and nine who took part in the trials at Oxford first school, 80 per cent favoured it over meat, vegetable pizzas and shepherd's pie.

At the Cheyneys school, three quarters of the 12 to 15-year-olds gave *Vegetarian Menu* the stamp of approval.

The principal of the catering department at Oxford Polytechnic, Mr John Robertson, who helped in the survey, said: "The media message is going through. Kids are far more discerning than we think. They love the *Vegetarian Menu*."

Staff at the schools said they enjoyed preparing the product, which is based on a vegetarian diet, but the *Vegetarian Menu* is not a meat-based product.

OVERSEAS

Rise and rise of the no-fun fundamentalists

EGYPT

Barbara Slavin reports on the growing power of Islamic students

Education is a serious business at Egypt's Asyut University - no parties, no dancing, no mixing of the sexes in public. Even holding hands on campus is taboo. But it is not the university enforcing these rules - rather Muslim fundamentalists among the students.

The restraints have been in force for a while. One pharmacy student complained: "For the last six years you can't get together with a girl on campus and for the last six years it's been impossible to hold parties on campus."

Last spring, several men were beaten and one was stabbed for ignoring militants' warnings not to talk to women at the sprawling 32,000-student university.

Fundamentalists are inevitably on a collision course with the authorities. Last spring, police shot and killed a student putting up a poster advertising a sermon by Sheikh Omar Abdel Rahman, a charismatic blind preacher who is considered the spiritual leader of the *Jihad* (Holy War) organization that murdered President Anwar Sadat five years ago.

Student unrest is not a new phenomenon in Egypt. Muslim fraternities, initially encouraged by President Sadat as a counterweight to leftists, swept university elections in the 1970s and demanded observance of conservative religious codes as a prelude to what they hoped would be the establishment of an Islamic state.

A fanatic minority, not content with veiling women and segregating the sexes, went on to commit such violent acts as the takeover of a military academy in 1974, the abduction and ritual murder of a former Egyptian cabinet minister in 1977 and the assassination of President Sadat as he watched a military parade in Cairo on October 6, 1981.

The climax came immediately afterwards when extremists staged a botched but bloody uprising in Asyut, 235 miles up the River Nile, in which more than 100 people were killed.

Egyptian authorities, having learned a lesson in the Sadat era, keep a pre-emptively close watch over religious groups on campuses everywhere and especially at Asyut, a perennial hotbed for religious tension because of the city's typically large Christian population, which acts as a goad to the Muslims, and the presence of the university, which attracts students from all over upper Egypt.

Fundamentalist leaders in Asyut say several activists were arrested before the start of the term on September 27 and 60 more are on a wanted list. They claim the authorities interfere in student elections and prevent them from holding meetings or publishing a newspaper on campus.

Despite these restrictions, fundamentalists won control of the student association and set the tone on campus. Most Muslim female students wear the *hijab* (headscarf) and modest outfits with long sleeves, high necklines and low heels. Some wear the *niqab*, a full veil that covers all but the eyes.

Since 1979, according to Dr Mohammed Habib, a moderate fundamentalist who was elected last year as president of the faculty club, male and female students have been obliged to sit on opposite sides of lecture halls.

A foreign teacher at Asyut says: "The fundamentalists dominate the university. They start lectures by praising Islam. They interrupt classes. They can do anything they like and the lecturers can't do a thing. Their influence is less pronounced on campuses in Cairo, but there - as elsewhere in Egypt and most other Muslim countries - Islamic activists are the most organized force."

As the militants of the 1970s age, they are moving decisively into the graduate world, winning majorities earlier this year on the board of the Egyptian Medical Association, the country's pharmacists' association, and faculty clubs in Cairo and Asyut.

They also made a strong showing in elections for the engineers' and bar associations, and in the prestigious judges' club, which has called for the imposition of *Sharia* - Islamic laws that would ban pork, alcohol and bank interest and could call into question Egypt's peace treaty with Israel and close relations with the United States.

One frequent misconception is that they come from the poorest and most uneducated sector of society. In fact, most activists are what one diplomat in Cairo calls "Islamic puppets" - upwardly mobile youth from middle and lower middle-class backgrounds who have been educated to expect a better livelihood than Egypt's faltering economy can provide.



Hard-line Muslims are enforcing stricter dress codes for women students

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Especially galling to these puppets is the quick success of a handful of businessmen who profited from President Sadat's *infitah* - the welcome given to Western trade.

The leftist writer, Mohammed Sid Ahmed, says: "Islam is the other side of the coin of the sudden wealth of *infitah*. It's a way to keep your emotional stability, a way to make your deprivations tolerable, virtuous and even militant."

No one knows how many Muslim activists there are in Egypt or how many would resort to violence to accomplish their goal of an Islamic state.

Dr Habib, a geology professor and member of the Muslim Brotherhood, a once-violent but now relatively moderate group, says 60 to 70 per cent of the Islamic students at Asyut University support the call for *sharia* mid of that percentage, 60 per cent are "militants". Those he defined as "impatient ones who want to ride a rocket to the goal, while moderates are content to go by car." Using his arithmetic, that works out to 9,000 "impatient ones".

As for the "patient ones", Dr Habib said their strategy is to build an Islamic state from the ground up, first reforming their own behaviour, then educating others to observe religious laws in their daily lives.

A key element of this strategy is the development of Islamic schools, clinics, banks and other businesses to provide employment for religious activists and supplement inefficient and inadequate Government institutions.

In Asyut, there are two Islamic clinics, an Islamic lumber factory, six Islamic supermarkets and four parochial schools established in 1978.

Muslim activists say their services are distinguished from the Government-run ones chiefly because they treat people "like human beings". They claim their schools offer a superior education, providing 42 hours of classes a week instead of the Government's 27 hours, and starting English classes in kindergarten rather than at secondary level.

Not surprisingly, the curriculum includes a heavy dose of religion. At the Dar-ul-Andalus primary school in Asyut, named after the Arab word for Spain, cherubic-looking girls in long green pinafores begin the school day by singing the fundamentalist anthem:

"We will answer the call of Islam. All of us will be sacrificed for Islam. We will be gathered together under the Islamic state. We will change society and the evil in it."

College closures leave students high and dry

MALAYSIA

Geoffrey Parkin on the swindlers who are stealing the chance of a decent career

Five privately run tertiary colleges in Malaysia have shut without notice during the past few months, leaving hundreds of students in the lurch after paying substantial fees.

Two of the closures were thought to be legitimate bankruptcies, but the others were clearly fly-by-night ventures in the business of fleecing the unwary.

The commercial crime division of the Malaysian police says it is doing its best to apprehend these educational swindlers, but thinks it likely they have already left the country. It is currently investigating three other private colleges suspected of illegal practices.

The most recent case occurred last month at a college in the capital, Kuala Lumpur, when more than 100 students preparing for A-level computing, accountancy and various vocational courses were left angry and disgruntled when their principal and administrators simply closed their doors without warning and disappeared with thousands of dollars in deposits, tuition and registration fees.

The four-year-old college gave no indication of its intention to shut and was still collecting fees and registering students only a few days before doing so. In May, 120 students were left stranded when the proprietors of the Kuala Lumpur Computer School in that city abruptly abandoned the school with student fees to the tune of \$45,000.

The future of stranded students is causing much concern, especially among other private colleges. Many have been forced to accept students

students, they say, will have found it a struggle to pay these fees, and will be heartbroken, having had perhaps their last chance of a decent career stolen from them.

Many will have completed a year or more of their courses with nothing to show for it.

In the last five years, the number of private educational and vocational colleges in Malaysia has risen dramatically to around 638, enrolling more than 200,000 students this year.

There are clearly big financial rewards in private education, but in the current economic climate even some of the most reputable colleges are finding it difficult to stay afloat. However, this has not deterred others from setting up a host of new institutions in the capital and the larger towns such as Ipoh, Melaka and Johore Bahru.

Malaysians, and particularly the ethnic Chinese, value education highly, and are willing to make sacrifices to pay for it. Thus, while state-run colleges and universities continue to provide only enough places for less than half those eligible - those who have obtained the necessary grades in the final school leaving certificate - private tertiary institutions will continue to be in demand, as well as study in overseas institutions for those who can afford it.



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Mr Mick Farley (above), Sheffield's senior post-16 adviser, is to be Liverpool's senior assistant director (further education) from January 1. He was formerly an assistant secretary with the National Association of Teachers in Further and Higher Education, and spent a year as secondment to the Manpower Services Commission.

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OVERSEAS



In favour: the lycées are set to gain from the jobs reshuffle

Teachers' lower ranks will pay price of budget

Robbing Peter to pay Paul seems the guiding principle in France's new education budget proposals.

The lycées — upper secondary schools — would gain 4,240 more teachers. But a similar number of jobs would be shed lower down the system.

The budget, to go before parliament later in the year, is the first for M. René Monory, the Education Minister and a former finance official.

The Fr168.2 billion (£18.2 billion) set aside for schools represents a 2.1 per cent increase on the 1986 figures.

The education budget, only surpassed by spending on defence, is less than in recent years. But the rise is still growing marginally more than the 1.8 per cent overall. And the Finance Minister, M. Edouard Balladur, says: "Every decimal point counts."

Inflation next year is expected to run at 2 per cent.

As far as schools are concerned, comparison with previous budgets is difficult. Under the decentralization process set in motion during 1983, the Education Ministry is phasing out responsibility for school maintenance and construction.

Despite the shift from central control, the ministry will continue to pay staff both in the state sector and in most private schools, so most French

FRANCE

Mary Follain on plans to expand upper secondary posts at the expense of other staff

teachers and administrative staff will remain public servants.

In line with the Government's commitment to a slimming down of the public service, M. Monory is making unprecedented cuts in his army of employees. Both teaching and administrative posts are affected. More than 4,000 teaching posts are to go, with primary and lower secondary schools the most affected.

The minister is giving priority to the lycées, which will receive 4,250 extra teachers to cope with the 70,000 new pupils expected next September. They will, M. Monory hopes, help the Government achieve its often repeated aim to educate 80 per cent of all school children to "baccalaureate" level by the year 2000.

Lycée intakes have doubled in the past 15 years and, even with 4,000 extra posts, heads will still have to juggle with the timetable, splitting classes where they can in Herculean efforts to avoid overcrowding.

IN A SLEIGHT OF HAND, M. MONORY IS

planning to lose teaching posts lower down the system to help the lycées. Primaries are set to lose 1,200 posts and lower secondaries (the collèges) are even harder hit with a 2,000 loss.

This year has seen a spectacular fall off in intakes. Instead of the usual 30,000-50,000 extra pupils throughout the system, there were only 1,700 this September. But despite the gloom, numbers are rising at primary as well as lycée level.

Primary intake is expected to rise again after having dropped over the last decade. The unions are unlikely to accept M. Monory's reduction in teaching posts, or his justification that — despite falling rolls — they have benefited by 10,000 new posts in 10 years.

Lower secondary intakes, however, continue to decrease. But that when parents and staff joined to demand and secure a sixth-form they had excellent results in A levels and university placements (this is wrong in his facts on both these issues).

There was (and is) in fact no "technical type" at either 13 or 14-plus and so no place for a school based on the mythical theory. We were in practice a grammar school with a technical bias.

This bias, however, was bought in curriculum time at the expense of a modern language and music and other aesthetic areas. Our curriculum was just as distorted as the grammar school one, which often ignored technical studies.

Grammar schools flourished because of social and educational prestige based on their legacy from the public schools. Technical schools failed to catch on because they were a "second tier" selection.

But Hudson is wrong in suggesting that he did not leave a legacy of much value to the comprehensives. On the contrary, very many if not all comprehensive curricula include a substantial technical element.

Not to recognize this reveals the old Adam in the DES approach — the public school bureaucrats never liked the technical schools anyway.

Their present enthusiasm for technical education is dubious and, as I suspect, based on a dislike for the comprehensives which displaced their beloved grammar schools.

MAX MORRIS, Former President National Union of Teachers, 44 Colindale Avenue, London N9

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LETTERS

Belated justice for the secondary technical ethos

Sir — I was intrigued to read the article about technical schools by John Hudson (TES, October 3), with whom I served in the Ministry and Department of Education for many years until my retirement from the Inspectorate in 1973. I recall an occasion in Essex when he came with me to Harold Hill where a crisis over accommodation had arisen: within days he had secured for us six new pre-fabricated schools and that took some doing in the roof-over-heads period.

The article does, I think, leave out a number of important points and does less than justice to the achievements of the secondary technical schools. For example, it does not even mention the Spens Report on secondary education which said that we had enough grammar schools and that we needed to supplement them by as many "technical high schools" as we had grammar schools.

It is surprising, too, that Hudson does not mention Crowther. This report, in 1959, gave special attention to the weakness of the grammar school curriculum (as did Spens) and put a strong case for "practical/aesthetic" subjects. It also devoted a whole chapter to "The Alternative Road" which re-stated the secondary technical ethos and supported "a practical education making progressively exacting intellectual demands".

This recommendation relied heavily upon the experience of the best of the technical schools. Heads of such

statements from the Manpower Services Commission and Elizabeth House.

Hudson does not explain why so many local education authorities were able to get development plans approved that did not make sufficient provision for secondary technical schools. Some, like Kent and several county boroughs, took the Act seriously for us six new pre-fabricated schools and that took some doing in the roof-over-heads period.

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Sex-stereotyping is still strongly present.

Gender divide

Sir — John Hudson's article "Whatever happened to technical schools?" made fascinating reading. The junior technical schools of the 1930s, though recruiting from the age of 13, were a part of the elementary sector, offering education of a post-elementary nature.

What is not commonly known though is that there were a small number of junior technical schools called junior housewifery schools. Thus only nine of the latter are to be found in 1939 among a total of 220 JTS.

In the junior housewifery schools, working-class girls might be concerned with what a 1939 board of education report termed "the intelligent management of a household". Such a vocational training might lead to jobs in domestic service, boarding houses, large stores, the catering trade and nursing.

What is interesting about the history of technical education is that the gender divisions between boys and girls, so evident in the past, are still to be found in schools today. Even in recent developments, such as the Technical and Vocational Education Initiative, sex-stereotyping is strongly present.

In short, the very words "technical" and "vocational" education are gender-loaded.

JUNE PURVIS, Oxford Polytechnic, Headington, Oxford

particular area are all of importance. Such sensitivity to "local views" was hardly encouraging for a dynamic experiment in education. The allocation of too much freedom to the divisional committees could well have implied a corresponding inability to exhibit any educational originality. Other Lancashire services of that period — such as police, health and welfare, and fire brigades — would clearly seem to have taken advantage of such freedom.

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LETTERS

A degree of written and oral skills

Sir - Professor Cox has given expression ("Prose purge", *TES*, September 12) to a growing awareness among teachers of English both in schools and in higher education that verbal arts constitute a proper, much needed and missing degree subject.

Following the publication of the report for literature in *The Arts and Higher Education* (Ed Ken Robinson, SRHE/Leverhulme V, 1982) interest in the teaching of verbal arts has been developing fast, especially among teachers in higher education. But if verbal arts courses emerge and become established only as part of an arts or humanities package they will inevitably suffer from any cut-back in the over-arching discipline. Independent undergraduate degrees in verbal arts, on the other hand, could stand on their own merits, in terms of the demands they satisfy and the contribution they make to the needs of society.

Creative, accurate use of language has long been recognized as among the most rewarding of personal skills. But in a modern democracy based on effective communication they become vital, both in the workplace and to the general health of society. Unfortunately, everyday experience and the comments of employers and employees alike indicate that good writing and speaking are less widespread than they need to be. Their underdevelopment bears on every area of learning, discovering and doing.

Only the educational system is capable of remedying this deficiency on a national scale. What has already been done - by many committed teachers and through a number of developments at secondary and tertiary levels - is still not enough.

I believe with Professor Cox that the importance of language in contemporary life should be reflected in the establishment of new undergraduate degrees devoted to encouraging and developing verbal arts. Such degrees, centred on the practice and study of a wide range of written and oral skills, both instrumental and imaginative, could also offer a number of options including writing in literary genres, for selected areas of the entertainment industry and for technical purposes. They might be modular, enabling students on other courses (whether in the arts and humanities or in technology and the social and physical sciences) to take relevant components.

My own experience of teaching writing at Lancaster and Birmingham universities, and for nearly a decade on the BA in English studies at Sheffield Polytechnic, convinces me that such a degree would indeed be viable in terms of teaching and assessment and would be extremely attractive both to well-qualified full-time students and to part-time students with or without prior academic qualifications.

There are also indications - for instance, at the Polytechnic of Wales -

that courses in verbal arts do attract students whose main interest lies outside literature, such students often attaining a high level of competence in their chosen modes. Moreover, students find after graduation that their verbal abilities prove useful not only in English teaching or in a writing career but also in many jobs less directly connected with English literature, linguistics or indeed any form of academic study. In addition, there is considerable demand from teachers themselves for short courses in the teaching of verbal arts, whether written or oral, literary or non-literary.

Most important perhaps, in the long run, the establishment of verbal arts departments would help us deepen our understanding of verbal production. Through theoretical research and practical experiment we could achieve a modern, expanded understanding of all forms of rhetoric and how to teach them.

Research into many areas of writing and speech has been going on for several years now, in a variety of academic contexts both here and in Canada, America and Australia. A degree in verbal arts could however create a focal point for all those with special interests in this area of teaching and research.

In addition, by drawing on the experience and skills of distinguished practitioners, a degree of this sort could, I believe, make important con-

tributions to the establishment of higher standards in imaginative and instrumental uses of language. From such a wide base it would be possible effectively to support work in the primary and secondary sectors (for example, the valuable investigations being undertaken by the National Writing Project). Schools at present find courses in verbal arts hard to argue for, especially beyond O level, simply because these courses bear no direct relationship to any full-scale undergraduate degree.

Given the already widespread enthusiasm among teachers for improving verbal skills, three or four undergraduate degrees in verbal arts could very quickly have a beneficial effect on the whole educational system, including further and adult education.

All members of a modern community need to use language well for a variety of purposes. This need transcends all political considerations, just as it transcends all subject boundaries. If Mr Kenneth Baker were to support this degree proposal, and see it through, he would have made a permanent contribution to British society.

ANNE CLUYSENAAR

Director
Verbal Arts Association
Woodend Farm
Joan Royd Lane
Fonistone, Sheffield
South Yorkshire

Looking in

Sir - The 17 teacher organizations and other interested bodies are to be congratulated on agreeing a broad framework for setting up a General Teaching Council (GTC) (October 3).

Perhaps eight-year-old John Adams' father should have been watching video nasties with him like other dads instead of doing O level maths.

According to Carol Mellors, gifted children who are allowed to learn at their own speed are in social and emotional danger. Surely the evidence is that enforced mediocrity, waiting for the slow and the reluctant, for year after year after year, is more likely to result in frustrated anti-social behaviour.

It is true, as Ms Mellors says, that children educated beyond their years could be lonely. Then why not let more such children out of the closet, instead of trying to stifle them all inside it? Ms Mellors points out that primary school children don't do O levels. True. But society needs gifted thinkers, especially mathematicians. We need children like John Adams to give us hope, and parents like Mr Adams, and schools like John's, which allow people to reach their potential.

More thought needs to be given to the process of enhancing professionalism through awards to those teachers who are researching the process of improving the quality of education within their own classrooms and schools.

JACK WHITEHEAD
Values in Education Research Group
School of Education
University of Bath
Claverton Down
Bath

History GCSE

Sir - I feel that I must reply to Mr Reddaway's letter (*TES*, September 26) in which he accuses me of quoting incorrectly from the International GCSE history syllabus. I have re-read those sections I quoted and find that apart from the substitution of the word "reasonable" for "satisfactory" I have been word-perfect.

The old method of self-defence fails here. Does an examination board really have to revert to its own inaccuracy in an otherwise fair defence of its production?

This aside, Mr Reddaway makes several fair points. I agree that in the *Anschluss* question provision is made for a longer answer but in the entire exam a student only answers two questions from section A - that is, "essay" type answers only account for 30 per cent of the marks overall. Mr Reddaway agrees that "being able to construct an extended, coherent narrative is a major part of a historian's craft". Is 30 per cent a major part? I never denied the value of source investigation, only its dominance in the exam.

Mr Reddaway goes on to cast doubt on my statement that "any student of the period would know that *Anschluss* was". Conducting a completely impartial test at my own school of third-formers and fourth-formers plus fifth-formers who had done, or were doing, the world history course, I found that out of the 10 students concerned, 60 could answer the question these five remembered. Perhaps my use of "any" was too strong. May I take the opportunity to replace this with 92.3 per cent?

I did not claim that source investigation itself was a dubious skill, only the presentation of source material with clues. I would hardly expect a research historian to present only the finding rare documents neatly lined up to help him discover their value.

Finally, I would like to point out that nothing more than rote learning is required to pass O level history "skills" take a back seat. Perhaps Mr Reddaway would care to compare Nairobi for a history lesson.

A.P.ARM
History department
Hillcrest secondary school
Nairobi



Sue Holmes: posthaste

Super Sue

Sir - Your piece reporting that only three women held second-tier education officer posts (September 26) stated those like myself who are connected with the London borough of Merton. We were also surprised when that authority, fast making a name for itself as being in the forefront of educational backwardness should have the nerve to begin styling itself as "an equal opportunities employer", be were then flabbergasted by the appointment of Sue Holmes as deputy director.

She had to be good! I bet you one Sue's a full director before the other three!

GRAHAM TERRELL

NAS/UWT
Member of Merton education committee

High life

Sir - The London Borough of Merton appointed its first woman deputy director/chief inspector, Sue Holmes, in July 1986. Perhaps she too is "Nearing the top of a steeply sloping pyramid" (*TES*, September 26).

RICHARD DAVIS
Director of Education and Recreation
London Borough of Merton
Crown House
London Road
Morden
Surrey

Poor image

Sir - We would like to point out the degrading nature of the illustration which accompanied the article about GCSE (*TES*, September 26). The caricature of blindness portrayed just the sort of stereotyping which makes it so difficult for visually impaired people to integrate successfully into society.

We would not expect such thoughtlessness to appear on the pages of *TES*. Perhaps it is indeed fortunate that the people most likely to be offended cannot actually see it.

M GRUBB
Headteacher; and
20 other staff members
Linden Lodge School
for the Visually Impaired
North House
61 Princes Way
London SW19

FEATURES

Painful extractions



Katy Simmons finds that slow learners, taken from the classroom, resent being committed to the remedial ghetto

The range of approaches to children with special needs was well illustrated in two recent advertisements in adjacent columns of *The Times Educational Supplement*. The first was short. A Support Teacher (Scale 1) was required, who would "perhaps" work in other departments of the school "as appropriate". The advertisement concluded, rather grimly, that remedial work in the school was done "on extraction basis".

In contrast, the second advertisement occupied three and a half column inches. The school was looking for "an outstanding teacher" who would be expected to "co-ordinate the whole school policy for children whose needs at school are outside the strict norm".

The advertisement went on to suggest the kind of children who might be outside this "norm": "the less able, the most able, the handicapped, the underachievers are some of the categories which might be deemed to belong to this new post".

In spite of the Warnock report and the 1981 Education Act, there is still no national consensus on the school organization most effective in meeting special educational need. In the first advertisement, we see the traditional "remedial" department, although it may well have been renamed as a gesture towards current thinking. It is probably small, possibly supplemented with a few part-timers and voluntary assistance from colleagues with an occasional free period.

The department probably deals with a small group of less able or troublesome children, though it may have the odd student of good ability who has a specific problem such as spelling. It is likely that children are "extracted" from lessons such as English or French, leaving them to follow the same curriculum as their peers only in such areas as PE or Art.

It is possible that the mainstream teachers from whose lessons they are extracted have no idea what they are doing when they are missing from lessons. One teacher in a large comprehensive school described how "extraction" worked in her school:

"I noticed that Steven had not been in my French class for several weeks. So I mentioned it to the other children. 'Oh he's gone to Special English', they chorused."

In effect, children such as Steven are pursuing a curriculum very different from that of their peers, often in a part of the school physically cut off from mainstream activities.

The second school, following Warnock's recommendation, is moving away from the categorization of "handicap". Clearly, the term "special need" is being used to cover a wide range of situations and it seems likely that many of the school's pupils may, at some point in their school lives, come into the "special need" category.

In this school, the teacher responsible for special needs is seen as having a key role in the school as a whole. Responsibilities might include the identification and monitoring of children with special needs, the development of resource materials within subject areas and in-service work with subject-area specialists. The school intends that special needs provision should be more than the isolated efforts, however well meaning, of the old-style remedial department.

Unless such a department has consistently been given high priority in a school, so that it has become exceptionally attractive to all pupils, and a place of high status, it is only too easy for it to become a ghetto, both for children and teachers. Any discussion with "extracted" children quickly reveals their sense of shame and hostility at being separated from their peers. The following comments were made by 11-year-olds in the progress unit of a large comprehensive school:

"I didn't mind coming into the unit at first but now I don't like it because I get embarrassed when people go past and when the teachers have a go at you because you are slower than

the rest of the school. We are treated differently."

Tracey

"I do not like coming into the classroom because I don't like people looking in the windows."

Nigel

"I would like to work in a different room to this because you get the mick taken out of you."

Robert

"I don't like it in the unit because it is a class for people who are thick. I like it in other classrooms, bigger ones, because you don't feel thick."

Linda

"I hate working in a small group because I feel small and stupid. I do not like coming to this classroom because it makes me feel more stupid than I already am and it really makes me feel small. I would like to be in a bigger group. It would make me feel better."

Graeme

"I would like to go into other groups so you don't get called dippy."

Jason

These children regularly hid under their desks at the end of lessons, when other children moving about the school would be able to look in and see them in "the unit".

The sense of shame persists even when children have left the unit. The following is an extract from an essay written by a fourth form boy:

"When I first came to this school, when I looked down the class list to my disappointment I was not in my friend's class, who I asked to come up with. I found myself in a small class, which quickly acquired a nickname and all persons who were in it as well. The humiliation of being in it has followed me through my time at the school. The teachers I think they live in a cuckoo land because they think pupils do not take the micky, teachers... do not know how this can affect your life inside and outside school."

It is difficult to imagine what meaningful work can go on in such an atmosphere. A sense of shame is not the only problem pupils have. The same fourth former went on to describe his experience in choosing options:

"You were told to work up to your options. So I was promised if I work I would be put up in the second year... So I work and work through first, second and third year but I did not go up".

Only after persistent enquiries by his parents, and the intervention of a concerned senior teacher, was the boy offered what he considered to be a reasonable choice of options. Once returned to mainstream, the boy's view of his education changed totally:

"In my third year I hated school and gave up trying to do anything... no one seemed to want to give me a chance to fail or even possibly to do well in a normal class. However, after my options were sorted out, school became a challenge and a joy. Although I am finding some homework hard and some classes hard to keep up with, I would not change this as they are the best times in my day."

This "extracted" pupil clearly felt that there were few alternatives to life in a remedial classroom. But even the prospect of failure is preferable, to him, to a life as a remedial pupil. However, there are alternatives. The whole-school approach to special needs can ensure that specialist help is given to pupils who need it, without the stigma of extraction. Underlying the



notion of a whole-school approach are several basic principles:

That all teachers, not just those primarily concerned with special needs, should be aware of the range of needs that might arise in their classrooms;

That all teachers should be responsible for assessing the difficulty of materials used in their lessons; and

That all teachers should have access to specialized help in dealing, inside the classroom, with children with learning difficulties.

The aim of the whole-school approach is to move the expertise of the special needs teacher into every classroom, and out of the isolation of the "unit" or remedial classroom. The role of the special needs teacher thus becomes advisory and pervasive, not simply restricted to a very small number of children but influencing curriculum planning and resources throughout the school.

For this shift to take place, the timetable of the special needs teacher should be flexible: if left unimpaired, at least for part of each day, then the teacher is free to respond to a range of needs. These needs might include:

Work with individuals or small groups;
Work with larger groups, leaving the class teacher free to work with children experiencing difficulties;
Support work within the classroom;
Preparation of materials for use across the curriculum.

Co-ordination of meetings between teachers and other professionals;

Clinic-service work with colleagues; and
Liaison with parents including the setting up of parental programmes such as shared reading, classrooms;

The teacher thus becomes a co-ordinator rather than an extractor: through work with colleagues, specialist teaching techniques are spread through the school and all teachers are urged to take responsibility (with support) for children who may be experiencing difficulty in their particular subjects.

Schools sometimes claim that remedial extraction is the only way that special needs can be met. Because "special needs" can be dealt with by putting all the children together, extraction is seen as a more economical way of using teacher time.

This approach not only ignores the social and political implications of such segregation. It also implies a fundamental misunderstanding of the very varied nature of special need.

In contrast, the whole-school approach dispels the ghetto atmosphere of remedial provision and gives all pupils access to the curriculum. It may also prove effective in reducing absenteeism and disruptive behaviour, and increasing expectation among teachers and pupils.

Katy Simmons is senior lecturer in the department of educational development, Oxford Polytechnic.

Training needs

Sir - I read with interest the letter from Mr J S Grove (*TES*, September 26). I hope that his study visit to Sweden has not led him to a belief that the small size of institutions and a concentration on the academic curriculum is the way forward for this country if it is to meet the needs for post-16 education and training.

The one element in our current system which has received a great deal of attention and support is the academic sixth form, and with national participation rates of around 30 per cent of 16 and 18 per cent of 17-year-olds continuing in schools, it has clearly failed the large majority of people. If we are to provide the kind of environment of opportunities for education and training that people deserve and the country needs, we must look to much more radical solutions than an emphasis on small 16-19 institutions with academic courses.

There are many factors which are much more crucial to the malaise which affects post-16 education and training in this country and Mr Grove gives cursory mention of one or two of them.

I would hope that educationists can begin to concentrate their endeavours on rectifying the problems arising from those factors rather than devoting their energies to bewailing the loss of that part of a system which only provided for a few, usually at the expense of the many.

DAVID EADE
Principal
Park Lane College
Leeds

Election fervour

Sir - All three of the articles about parent-governors were interesting (*TES*, October 3), but very negative and depressing.

It doesn't have to be depressing! We had proper elections, with "mini-biographies" of candidates. An elected parent-governor can elect chairman of the governors (I was). A headteacher can invite governors to visit the school more often (our head does). Appointed governors can be parents too (four out of five had children at the school). We can, and do, use our power, but this does not have to involve conflict; we can usually work harmoniously.

Education has plenty of bad news at present. Parent-governors are good news, what we all now need are examples of "good practice" to emulate.

DAVID R WRIGHT
Parent-governor and
chairman of governors
Maidenhead Middle School
The Common
Maidenhead
Norfolk



Cruelty can be the withholding of intellectual stimulation

Unwanted gift

Sir - I cannot accept the view of Carol Mellors (*TES*, September 12) that academically precocious children sacrifice their childhood. To a gifted child, cruelty is the withholding, not

States sides

Sir - At a recent conference, Barry Taylor commended the United States Department of Education publication *What Works*, as helpful in drawing together research findings (*TES*, September 19).

While I too would applaud efforts to make research findings more accessible to teachers and local authorities, I would not join in praising *What Works*. It is a highly selective and ideologically distillation of research findings.

Two main principles seemed to govern its compilation: that no findings implying extra expenditure should

Honour bound

Sir - I sympathize with Garth Freeman and the disappearing probationers and the disappearing probationers. It is made clear to all PGCE students from this university that verbal acceptance of an offered post is considered to be binding on both parties.

Heads themselves are not entirely blameless. This year two of our students in shortage subjects were made verbal offers at interview which could not subsequently be confirmed until a lengthy procedure, which in one case involved re-advertising the post nationally, had been completed. Another of our students with two

degrees (neither, unfortunately in physics or mathematics) was offered an interview and accepted a post in an FE college. When the written confirmation failed to arrive he rang the college to be told that "everyone was on holiday" and wouldn't be back until September. When he phoned again in September he was told that they were no longer in a position to employ him. He, like Garth Freeman, is justifiably put out.

ANGELA DIXON
Lecturer in Education
Celli, Bewell, Centre for Science
Education
University of Bristol

FEATURES

Homage to Mounstuart



Twenty years
of multicultural
teaching
in Cardiff

People come to Cardiff from all over the world to visit Mounstuart primary school. Politicians, education officials and private citizens come to the school in the capital's racially mixed Butetown to pay homage to the school curriculum of Betty Campbell.

Mrs R E Campbell MBE, DipEd, HonBEd, MEd, is quite possibly the only black headmistress in Wales. Of her citation from the Queen for her work in education and the community, Betty Campbell is embarrassed. As for her unofficial star status as a black achiever, she refuses it: "It's the work you do," she says, denying any political significance in her position.

The university degrees, obtained 20 years or more after she had married and raised four children, were proof – to what she felt was a sceptical white world – that her achievement was not a fluke. But more importantly, the writings she produced in eight years of study are a crystallization of the philosophy which has stamped Mounstuart.

The belief in a pluralistic society as a moral good and an education which reflects that, were enshrined in Betty Campbell's earlier work on primary education. Her DipEd thesis, *Many Ways to God*, was a look at religious topics which could be used as a way of introducing different religious faiths in the classroom; her BEd thesis examined the development of English language in social priority area schools and how it could be improved.

Last year her MEd thesis, *The Development of a Multi-Cultural Curriculum*, was published. Betty Campbell's primary school, erected on Research and written in five years, it is the Mounstuart ethos transcribed.

The site of a razed Victorian school in the middle of a slum clearance area, has an official policy of multi-cultural studies. The 150 children on the roll include some with ancestors and relations from Bangladesh, Africa, Fiji and the West Indies and they use books with characters reflecting a multi-racial world.

Topic work on colour naturally extends to an examination of skin colour. The pupils conclude: "All our skins are shades of BROWN." The theme of light becomes a study of three religious celebrations in which light is used: the Jewish *Hanukkah*, the Indian festival of *Diwali* and the Christian observance of Christmas.

The theme of "Indians" promotes a study of North, South and Central American Indians, Asian Indians and West Indians. Work on symbols is a look at religious signs and symbols. Muslim, Christian and Rastafarian children study Judaism and produce the musical about Jewish traditions, *Fiddler on the Roof*.

Students are asked to write about how they would feel if they were strangers in Britain. At the same time, one-third of Mounstuart's pupils are white and the Welsh influence is not forgotten. In one project students are asked, and answer with a written response, the question, "Am I Welsh?" The walls and tables of Mounstuart's hall, where assemblies attended by parents are held every Friday, are lined with past and recent work: class-produced books on multi-racial topic work, paintings; drawings; and pupils' ethnic handicrafts.

"We use language as a vehicle to develop a multi-cultural curriculum," Mrs Campbell says. "Any opportunity we have to implement our approach, we take. We use language in all its forms, in a broad sense, both the written and the

spoken word.

"One project on language involved looking for racism in real life. We looked at newspaper articles and how they were written. We integrate art and language symbols. We find that language stimulates us.

"We started off the letter-writing. We wrote to embassies for information about their countries. They replied and that led to a project in which all the kids made puppets representing different races. This in turn, led to play-writing.

Last term the school theme was the Caribbean. Children in one class studied from West Indian readers; in another, they made their own West Indian instruments. Each class wrote material and produced art for a book on Caribbean history.

The culmination of the project was a colourful production called *The History of the Caribbean in Song and Dance*. The children wrote the music. A calypso and a student teacher put them to music.

A wall display with photographs and explanatory notes about the Caribbean project said: "All work for this took place in normal lesson time and was an integral part of the curriculum and not an extra."

"A lot of people just look at multi-cultural education and say it's festivals, 'you're going to have a steel band'." Mrs Campbell says. "It is not just pretty song and dance. They don't associate it with the development of the child."

The Mounstuart curriculum stresses the similarities in cultures: "We try to minimize the differences," Mrs Campbell says. "We try to link things up. We all believe in God whether you are a Jew, muslim, Rasta or Hindu: everybody has a right to do what they want to do, to believe what they want. Maybe that accounts for our success is not having parents say, 'I don't want my child involved in that'."

Betty Campbell insists there is nothing miraculous about her scheme: "It's simply good teacher practice. There's nothing magical about it. We take the normal curriculum, the normal approach, but we broaden it. I like the term used for the Swann report – *Education for All*."

"When staff come here they're told right away that I am committed to a multicultural curricu-

lum. Every member of staff I've had have all been totally committed as I am."

What Betty Campbell will concede is the large effort that goes into providing an intensive multi-cultural focus to the curriculum. After 11 years of practising what she preaches, she now finds it hard to explain her programme. "It's natural now," she says. "It's not a one-off thing because there's somebody coming. It's going on all the time. Other schools may do one particular topic and not do anything for a long, long time. They think they've done their bit."

The headmistress born and raised in the Cardiff docklands had definite ideas when she took over in 1973. But she was also aware she would have to work equally hard on teaching the basics to the children from her area.

"We've progressed from having a school where remedial teaching was necessary for most of the children, to having, in 1984, three children go on scholarships to (Cardiff's) independent Howell's Girls school."

"We've improved the reading standards but it was a hard grind. There were three of us (staff) doing remedial work."

In the early days, staff had to make their own books for the Asian children because there were no suitable ones. They used photographs and articles and wrote their own stories. What books they did buy came from the Commonwealth Institute in London. Today, Mrs Campbell orders textbooks from a catalogue as any other head does. And, through the years, the school has built up its own resources.

Mrs Campbell says that only through multi-racial studies can her aims be achieved. "I want a literate school. I want children who respect each other. I want children who will have confidence and who will be able to take their rightful place in the multicultural society."

Betty Campbell does not ignore racism or entrenched white power. She says her children know that racism exists but they will be better able to deal with it because they have been taught self-respect no matter what their colour.

Catherine James

The Avon gorge



Hilary Moriarty investigates
one attempt to bridge
the gap between primary
and secondary English

If you teach English, you may feel that you are in everyone's line of fire at the moment. If you teach English in Avon however, you have a defence. The Avon Literacy Progress Record Card records achievement in literacy and gives detailed evidence of a pupil's strengths and weaknesses. If teaching English means a child must acquire literacy, here is proof that the job is being done.

The card was a direct response to the Bullock Report. Designed by teachers and advisers, it was introduced in 1977 to encourage teachers to understand the complexity of literacy development.

Recording progress begins in the infants' class with the child taking the card into the first two years of secondary school. Used properly, it should form a bridge between the two. The card gives an accurate guide to the child's level of literacy, allowing secondary teachers to build upon work already done at primary level.

Iain Ball, English adviser for Avon, is firm about the importance of this link-up.

"Too often secondary teachers announce that now the children have reached secondary school, the real work begins – as if you could ignore all that's gone before. We must acknowledge all that a child has experienced in the primary school, and use and build upon that. This card allows us to do that."

The card came with clear guidelines. It was to be gradually introduced throughout Avon – giving teachers the chance to get used to it.

"It was vital that the card be introduced incrementally, with lots of in-service training right through the programme," says Iain Ball.

Teachers have therefore been trained as the cards have appeared for use with their classes: infants' teachers were first, and as the children

and the cards progressed up the school, so more and more staff were involved in both their use and the in-service training.

What does the card involve? Roughly the size of a sheet of A4, it is divided into columns with headings such as phonic skills, visual skills and sequencing, use of language, comprehension skills and higher order reading skills. Each of these is subdivided into specific skills such as consonants (phonic skills) and scans (Higher Order Reading Skills).

The teacher records a child's attainments with a system of blanks, lines singly or in cross form to show increased competence, completely black blocks and stars to indicate outstanding ability.

Simple marking is important because it helps cut time taken filling them in, and, for the next teacher, such symbols are easily read.

Paul Robinson, head of English at Broadoak school in Weston-Super-Mare has been with the authority for two years, so is a relative newcomer to the card. He finds a high degree of accuracy on cards coming up from primary schools.

"They are so detailed, that I can give each child a complete profile of his or her skills in English, just by reading it and going over the card with the child. It builds up a very full picture. If you get one that's covered in black boxes, then you know you have a high-flyer, who will be capable of almost any written task. The cards are a great help in matching the capability of the child to the task."

It's not just the high-flyer who benefits. If a child has blanks where others have attained competence, courses can be tailored to their needs.

As Iain Ball points out, "We are inclined to think of education as being for all children; we must recognize that for each child it is that child's only chance. This record card helps us to cater for

the needs of each child."

Is it really the best thing since sliced bread? Well, yes and no.

For a start, the card is still developing. It is now a primary school document, extending into secondary schools. So there is more detail – a dozen boxes – under phonic skills, than under communication skills (writing), where the three boxes run the gamut of expressive, transactional and poetic.

However, Avon is one of the counties involved in the National Writing Project, with particular interest in English between the ages of 8 to 13. Richard Bates, Avon co-ordinator for the project, is reviewing the card's communication skills, recognizing that more detail is called for.

There is also danger of consumer resistance. Jo Hamilton, now head of St Michael on the Mount Church of England primary school in Bristol, but one time teacher of English in the secondary sector, opposed record cards at first.

"The cards were introduced when I was a Scale 1 teacher in a primary school, and I thought they were just a trick to enable advisers to control the curriculum. I was resentful."

She has since been converted: "They have tremendous diagnostic value for individual teachers – they narrow down to specifics what is, after all, a very broad field. Lots of record cards are quite unrealistic, but these are quick and sure and can be very accurate."

As head she can also identify problem areas throughout the whole school, should any arise. But while Jo Hamilton has been convinced, others have not.

One secondary head of English thought the card superfluous – useful only to non-specialists. "For them it provides a map of items which they ought to be covering. For the English teacher with a clearer idea of the horizons which English teaching should be opening to children, it's the equivalent of a swarm of gnats – something of an irritation to be got rid of as soon as possible."

It was at once, he asserted, a sophisticated diagnostic tool – look at the range of those boxes, yet, at the same time, it was a remarkably crude instrument – when all was said and done, you were down to "occasionally", "frequently" and "independently" as definitions of progress to

competence.

What might appear the card's strength, in accuracy, might be seen also as its weakness. The same teacher said the card, with its categories and its key, attempted to quantify the unquantifiable. "It tries to pin down into little boxes what is in fact an enormously difficult, complex and fragile process. It's great for bookkeeping colleagues who have a content-based subject, and parents, but it doesn't help the practising teacher to reach any better."

Another secondary head of English said the card had sparked deep resentment throughout Avon. There had been lots of confusion over terminology and a feeling that primary schools were being tested rather than helped. He said he approved of the intention, but saw the system's delivery, with its in-service training, as counterproductive and antagonistic.

Both dissenters felt the project was a diversion from above – brought into effect in a programme which was more assertive than sympathetic. Indeed, the cards are part of Avon's policy on literacy. They are obligatory in primary schools and the first two years of secondary schools. The county is convinced of their value.

It seems laudable – as even its detractors admit – to introduce a county policy on something as basic and vital as literacy. Every primary school has a language co-ordinator, over-seeing the cards and liaising with secondary departments on literacy.

It also seems praiseworthy to give that policy an incremental, 15-year introduction and to back it with initiative with extensive in-service training. The card has not been tossed at teachers with a "take it or leave it" carelessness. Someone very high up cares a great deal that this card should work.

On the other hand, all of these laudable things are the very stuff of which teacher rebellion is made. Teachers don't like being told what they should do and they don't like being told they must attend meetings about a project they have not been party to from an early stage.

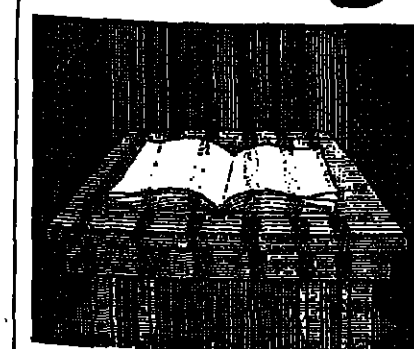
At a troubled time for English teachers, the Avon Literacy Progress Record Card is at least one way to tackle the problems. It is evidence of effort, thought, attention and will from a high level. But that may be its undoing.

FEATURES



'an illusion of possibility which nothing short of a miracle would open'

Doing time



A prison lecturer
reflects on
the punctuation
of long-term
incarceration

Les, bent anxiously over his desk, sighs deeply and makes a cigarette the width of a match-stick. Dan's arms, like totem poles, a writhing mass of naked ladies and dripping daggers, hold up his shaven head in a world-weary manner as he stares at the blackboard, which, incidentally, is blank. The hand that probably held a shotgun with ease grips a pencil as if it were seeking the sanctuary of the Durham Knockers.

The class of 12 men grapple with the placing of apostrophes. Oh, the ubiquitous apostrophe! That such a tiny mark should lay such strong men low! Words are written on Her Majesty's stationery with the same magic that must have surrounded the first word followed by a finger in sand.

Larry, brilliant with "the verbals", is contorted by the effort of writing one of the first sentences he has probably created in his life. There is a tension which criss-crosses the room like tripwire. The use of the apostrophe seems about as fraught as if I were learning to use a firearm. Time for coffee, I think.

All teaching gets to you in the end, but some teaching gets to you more deeply. Other people may fall about at their own jokes – "Well, at least you've got a captive audience." – but prison-made. Teachers don't like being told what they should do and they don't like being told they must attend meetings about a project they have not been party to from an early stage.

At a troubled time for English teachers, the Avon Literacy Progress Record Card is at least one way to tackle the problems. It is evidence of effort, thought, attention and will from a high level. But that may be its undoing.

from normal life, of retreats being cut off. There's an undercurrent of tense acceptance that, for both staff and inmates, choice and free will are firmly anchored outside the perimeter fence. And most palpable of all is the feeling that "waiting" is what it's all about.

Prisoner governors wait for crisis to envelop them, prison officers wait for transfer, they talk of it all the time. And of course inmates wait for release, for the hours and days, months and years to tick relentlessly by.

There are also the remarkable extremes of noise in a prison. Fifty prison officers, keys a-jangling, metal gates banging with ear-splitting ferocity before and behind them, boots crunching on concrete as if every step taken is putting to death some potentially lethal insect, is as formidable a sound as one should ever wish to hear.

At other times, you can walk across a quadrangle bordered by tall, silent buildings, hundreds of windows looking out, barred, like eyes with cataracts, knowing that hundreds of living human beings are in there, somewhere, and hear nothing but a low whine of the wind swaying the inner fencing, seeing no movement except dusty sparrows fighting for crusts.

There is a disturbing isolation about teaching in a prison. This is partly because of the nature of the institution, the constraints of the Official Secrets Act and sometimes simply the location of the place itself. However, this also stems from the fear and prejudice that surrounds prisons and prisoners: the kind of impression that friends and colleagues feel that you are working in a place which is an awful amalgamation of a hospital for communicable disease, a zoo for the world's most ferocious wildlife, and a gulag for the President

and the deranged.

Contrary to popular myth, the men look no different from any group of adult students you come across in any evening class or college. Their eyes are not particularly close together, their cars are not hanging off, their knuckles do not trail on the ground and their cheeks are not laced with hemming stitch, where a little running repair has been performed by a gangster's moll in the back of a getaway car.

The men come to classes for reasons various and sometimes devious. Better the boredom of punctuation than the mind-numbing of sewing mail bags. Some come for a change of view, for a chance to see some new faces, perhaps to see a few females, to have a bonus cup of tea, or maybe it is to get away from some potential enemy in the workshop or to whisper a few threats to a fellow student.

But also there is the chance, slim as a prison roll-up, but nevertheless a chance, that education will pull a man out of the clutches of a lifetime's training in crime. Fortunately, the inmates that join a course out of a genuine hope for a change or growth can easily be spotted, even though they must appear to their fellows as blasé and unconcerned as the rest.

The normal hooks that you look for with a class to hang your subject on – past experience, present situation, future aspirations – are, of course, not there. Prisoners are understandably reluctant to reveal information about themselves and the facts they do divulge have to be finely filtered for dramatization and hyperbole. Likewise, you too must be guarded and protective. However charming and amusing the students may appear, however important it is to lessen the burden of their "labels", however vital it is to see inmates as real, live, thinking, feeling humans who need to hear about ordinary things, domestic detail, everyday happenings, you have to be well aware of the vulnerability of the situation you are all in.

While many teachers would admit that classroom interaction is like a play in short acts, with invited audience participation, prison teaching is more like a mine on a deserted stage, where the audience response is measured by the rustle of cigarette papers.

I exaggerate a little to make a point but something about the way our society views prisoners, reinforces the enormous distance between what is possible and what is probable. I find it hard to imagine my present class in 15 years' time, their multicoloured biceps crammed into dapper business suits, their flowing hand signing well-dictated letters, their lifestyle comfortably supported by flexible friends. This is the kind of image the inmates like to create for themselves – and who can blame them dreaming of something rather different after 10 years in a blue cardigan, a room not much bigger than a cupboard, with two quid to your name if you're lucky?

I do, however, frequently wake in the small hours and think of my students as they are now, stacked like battery hens in boxes of grey concrete and artificial light. I recognize the need for punishment and protection, but the reality of one long year on another, the same view, the same divisions of time, the same food, the same clothes, and the only passport to change on offer being an O level or two, a business studies course perhaps, or for the lucky few, an Open University degree, fills me with deep depression.

Of the 47,000 prison population, so very few are given any real encouragement or help that, when they do emerge, they stand out like beacons in the night. Some sort of education is provided in all penal institutions but, in general terms, it barely begins to scratch the surface of what inmates either want or need. I feel that the kind of education on offer in most prisons does nothing but paint a door in *trompe-l'œil* style – creating at best an interesting picture and an illusion of possibility, but nothing short of a miracle would open.

We return to the dreaded apostrophe and Fred, six years down and another seven to go, reveals himself as an earnest seeker-after-truth. "Look, what I want to know is, if I was writing to someone, how'd I write this?"

"What do you want to say, Fred?" I ask and the class grin indulgently at the beleaguered Fred.

"Where'd I put the frigging apostrophe in 'I'm going to get you'?"

We all crack up with laughter and another few seconds have slipped softly away. Where you place a wretched apostrophe isn't going to stop you holding up a bomb if that's where your expertise and inclination lie, but educators in prisons should be the last to allow themselves to be just "doing time".

J Lennox Barnes

mental skills required for self-help in reading and spelling. The games appeared to both bright and dull pupils, and have proved useful over the years in improving articulation after the first term of teaching pupils aged five-plus, three parents came to thank me for the therapy achieved.

For three years, I taught a "C" stream of 35 pupils aged seven to eight. In the first term, one-fifth of the class were promoted after six weeks. In the second term, five were promoted at Christmas and Easter - numbers were kept constant by demotion from the two "B" streams.

Several boys achieved the "A" stream after two terms. They had previously been taught by "look-say"

articulation and develop lip-reading skills. Remedial help can be provided before pupils have experienced failure and frustration, and before they develop a fear of attempting reading; a factor in failure.

Group instruction in oral activities with finger-play may be described as "old-fashioned chalk and talk," but they make the approach easier for both teachers and pupils, who cares?

Richard Woolfson comments, "Every child who has special educational needs should get the necessary help." Perhaps the lecturers and advisors who are training teachers should attend the Dyslexia Association's diploma course, so that our teachers can receive it.

J. Lennor Barnes is a retired deputy head.

Richard Woolfson acknowledges that he relied heavily upon the Open University Education Course *Reading, Personality, Development and Learning*, Unit 25 'Dyslexia' by W. Swann as the source for his article in *THE TES*, September 19.

Sue Mounsey

least if they had received a little more information, they might have shown a little more enthusiasm.

● Some parents could not attend the election meeting at their child's school on the specified day and time.

Did it not occur to the administrators that everyone does not have a 9-to-5 job? Some people have to work in the evenings. I realize that no one could ever arrange a time to suit everyone, but surely some alternative provision should have been made for those who would have liked to attend, but simply could not and so lost their chance to vote.

● All parents could attend the elec-

It might be argued that, if people could not be bothered to attend, it was their own fault. But is this really fair, just and democratic?

Surely it would have been possible to have a closing date for nominations before the meeting.

The system of last minute proposals, although seeming to be fair, is open to manipulation by parties who can arrange to make a late proposal and gather supporters who will ensure that by turning up in force some candidates are sure to be elected.

● I feel that there is a grave danger that the governing body will remain unrepresentative of the ordinary parent because of the way it has been arranged.

I appreciate there have been many differences of opinion behind the scenes on the organization and implementation of the 1980 Education Act, but that this has only resulted once again in parents and children being the ultimate losers.

If the system is open to manipulation then, particularly in the case of

schools controlled by a church body there may be a bias towards those of that religion, the governors being voted in only because of their strong ties with one or other church.

If teachers who are also parents become governors this can also result in an uneven representation. I am not suggesting that anyone should be ineligible to stand, but still fear that the idea of a true cross-section of interests will not be represented.

I know that as a body, parents are often apathetic about meetings at school. I have been a teacher, so I know the difficulties of engaging parents. As an administrator, I can see the need for administrative support in an alternative way of coping with the question would perhaps have been more costly, complicated and have been more time-consuming.

But the organization of this meeting seemed to be done too quickly, and near the beginning of the new term. I know that children lose letters on the way home from school, but would they have been any more likely to lose a letter of proposed candidates if one had been sent home, along with a tear-off for the evening, than the letter that usually came home inviting parents to a meeting?

No system is foolproof or perfect, but surely this could have been done and a check made to see that voters were genuine?

I feel that not enough planning and structure went into the organization of what should have been an exciting and innovative improvement in our educational system.

When I pointed these things out to my local education authority, it was clear that many of these things had been done, and they have now promised to do so before the next election - showing that, if approached in the right way, I.E.A.s will listen.

INDEPENDENT LEARNING

Peter Thomas

Colin Swatridge's article, "Making our pupils into students" 7/25 September, p. 26, raises important issues for teachers of sixth formers to give students a chance to show independence and initiative and to develop abilities beyond the strict confines of set syllabuses are clearly important objectives. However, AS levels or general studies exams are not the only ways to achieve this end.

The effects of GCSE changes on A level teaching are still in the future, but it is already possible to see in our sixth form colleges certain of the positive features GCSE has introduced. These studies, computer studies and social biology A level courses, for example, include project work as part of their final assessment. Significantly, all these are relatively new courses.

More and more departments are using large-scale, researched essays as part of their teaching. Slowly, the students are being encouraged and helped to become independent learners. It needs to be real students, not just pupils. Not all A level students intend to continue to undergraduate level or indeed are capable of doing so and, for them, the intellectual demands within their standard courses are quite sufficient.

A level students are only one section of the 16 to 19 population. The qualities that independent work can provide are just as appropriate to students resitting exams or certificate or pre-vocational education classes as they are to potential Oxbridge candidates. Our college, therefore, has used general studies time to provide practical courses and courses with a vocational slant to balance the rest of the student's work.

The skills and personal qualities students acquire are recorded on a vocational certificate jointly supported by the state and local firms.

The basis for general studies choice is the student's interests on their career plans. Moreover, in addition, students can choose an independent learning option. It is this option suitable for students of all abilities. Students who choose independent learning are allowed time within their timetables for the work but it is not directly supervised. Staff monitor each project on a regular basis, review progress and, with the students, set targets for the next part of the work.

Students who choose the independent

Behind all those mock-battles between artists and the State, the underlying impulse was essentially a benign one. Irving Wardle reviews a new book about Sixties culture, and Michael Clarke looks at an exhibition

Too Much. By Robert Hewison.
Methuen £14.95. 0 413 4079 0.

Every time I drive into London I pass a wall in Twicken Park where somebody has sprayed the now faded message: "Destruction is a Creative Act." Being a middle-aged householder, I recoil from it. It triggers off pictures of wrecked football stadiums, vandalized phones, music that bursts the ear-drums and needles going into youthful veins. But hang on. That point is very old: and, anyway, nobody in the Eighties talks about "creative acts". Maybe that slogan went up in the Sixties, and if I had passed it then (unburdened by property or family) the pictures would have been different: John Latham, perhaps, burning his skob towers on the South Bank, or Robin Page coming on stage to shout a plant to death; Howard Brenton declaring war on Goethe and Beethoven. Plenty of rebellion against the blue meanies and the mighty dead; but not yet in the form of nihilism and terror.

What you will not find in the book is any opinionated view of the period or critical appraisal of the material under examination. As in the previous volumes, the method is to describe the intentions and characteristics of any given work as a starting point for subsequent discussion of whether it is any good or not. It is not until the last chapter that Mr Hewison breaks his long embargo on the first person singular. Until then, the best clue to his viewpoint lies in his title: *Art: the American Society in the Sixties: 1960-75*.¹ In other words, the Sixties went on until the money ran out.

Bought at Biba

1966 and All That! Design and the Consumer in Britain 1960-1969.

The Whitworth Art Gallery, Manchester, until December 6.

One of the many virtues of this exhibition is the recognition it gives to the contradictions and conflicts of the era. While the first men on the moon encouraged the use of synthetic materials and high-tech imagery, like Robin Day's very successful, injection-moulded polypropylene chairs or the ephemeral, transparent PVC boots, coat and visor helmet chosen by Ernestine Carter as Dress of the Year for 1966, there was also a headlong rush into revivalist styles from Art-Deco and Art-Nouveau to Hippie orientalism and Carnaby Street, mock-Victoriana. Barbara Hulanicki's Bliba shop tried them all before it finally went bust.

Not that there was no mainstream modernism. The general public may recognize the decade from Vidal Sassoon haircuts, flared trousers, kipper ties, Cass Pupo rugs and psychedelic graphics. Like Harpashish and The Coloured Coat's posters for UFO concerts; or Alan Aldridge's covers for Penguin Books. But it also included relatively predictable, domestic ware, like Denby pottery, Darington glass and Old Hall stainless steel, as well as the interior design of the prestigious QEII which now looks so sober that it is hard to believe that anyone could have taken

the liner for "a floating swinging London".

Winding its way through this densely-packed labyrinth of objects from disposable plastic cutlery, paper chairs and dresses to the rebuilding of Manchester and the construction of nearby Runcorn New Town (The Shopping City) is what amounts to a verbal and visual commentary (expanded in the excellent catalogue, Trefoil Books £8.95) revealing the forces that created this exuberant decade; the economic potential (Macmillan: "You've never had it so good"), the political ambition (Wilson's modern society "reformed on the white heat of technology") and the role played by advertising, marketing and re-tailing.

Sixties design can now be better understood in the context of a consumer boom. With unemployment at a record low, many more people than ever before could buy the kind of things through which they wished other people to see them, and so, the usual job of the designer to sell goods was elevated. But if we prefer to focus our attention on "celebrities like Mary Quant and Terence Conran, we should remember, as this exhibition does, that Bazaar and Habitat shops were paralleled by the equally consumer conscious Sainsbury supermarket chain which had its own design team led by Peter Dixon. Their packaging, like the luridly printed "Salome" trays and tablemats designed by Jan Logan for JRM Designs, is just as much a part of the decade.

Michael Clarke

Activities Committee; and the minimalists attempt to liberate art from commercial exploitation by abolishing the art-object - only to make a handsome killing in the galleries. The argument extends beyond strictly financial matters into the Sixties theory of "repressive tolerance": the idea that because the bourgeoisie supplies the radical artist with cash, freedom of expression, and an audience, that proves its monolithic opposition more conclusively than if the police had moved in and thrown him in the slammer. Looked at from this angle you might say that the Living Theatre and the Fluxus group had nothing to teach the middle-classes about auto-destructive art.

Nature, as Bernard Shaw said, demoralizes us with extended credit and then ruins us with swift foreclosure. That is certainly one message of the book, which piles up evidence to show a generation riding high on games, brought down to earth by the recession. ("Hurry while stocks last", I remember, was a buzz-phrase of the mid-Seventies). On the other hand, as Mr Hewison is the first to ask, what's wrong with games. They sprang from an urgent need to rewrite the contract between the artist and the community; and some of them - fringe theatre, the poetry revival - have triumphantly survived into the ensuing ice-age..

A companion strand to the mock-battle between the artist and the state is the very real internal struggle within the artistic community to redefine its own milieu. For this, Mr Hewison draws on the anti-psychiatric concept of the Divided Self, showing the separate convulsions in theatre and the graphic arts as part of a compulsive pursuit for the lost sense of authenticity; substituting a "long from" of culture for the inherited hierarchy, and promoting varieties of collage in place of individual disciplines.

A distinguishing factor among these many experiments was their singular lack of aggression. One reason for regretting the passing of the Sixties is that it was a friendly time. Pop-art, as Mr Hewison says, ranks one of the few avant-garde movements that celebrated its surrounding world. For once, the authentic and the hugely popular could coincide, sometimes with dismaying absurdity; as when Bridget Riley, unveiling an exhibition of abstract paintings, found they had been copied by fabric designers and were already on sale in the shops.

"Come Together", the title of the Royal Court's festival of crossover art, expresses the mood of the time: when everything was in question, and when, artists, the intelligentsia, and the general public all had a stake in working out a new deal. The reasons why no such deal emerged are set forth with great clarity in this book's final chapters. They are no less important now than they were then, if we are to have any hopes of getting a second chance.

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Roads to freedom

Writing Against: a Biography of Sartre. By Ronald Hayman. Weidenfeld and Nicolson £14.95. 0 297 79002 1.

At a mere 450 pages, Sartre would hardly have considered that Ronald Hayman's biography constitutes, as its publishers claim, "the full life story". Sartre's own direct contribution to autobiography, in *Les Mots*, is shorter; but most of the writer's huge output has an autobiographical element and his studies of Genet and Flaubert not only make Hayman look like an essay, but remain pointedly unfinished. Sartre lived, as Hayman says, with one eye on his posthumous existence which has been the matter of a considerable industry since his death in 1980. There is something very unSartrean in this enterprise of reducing his 75 years, even for foreign readers, to the dimensions of a single volume.

Hayman is, indeed, not a Sartrean: in sympathy, but not in harmony with his subject. He prefers the writer to the theorist, and this is not the place to look either for an account of Existentialism or for an analysis of the later developments of Sartre's philosophy. For that the English reader can turn to Peter Caw's *Sartre* where modifications in his ideas are interpreted essentially as part of a consistent evolution. Hayman, without describing them in great detail, emphasizes that "volte-face" or this "chemical change" in Sartre's thinking and his grasp of some concepts, like the crucial one of "bad faith", appears shaky.

He is much more at home with the literary work than with the philosophy and perhaps demonstrates a sympathy for the man by implying that the theoretical writing was fundamentally self-destructive. In the novels, he shows Sartre recreating himself and incorporates his account of the fiction so closely into his narrative of Sartre's life that the transitions are often muddled. In contrast to this creative Sartre, preserving himself in his fictional characters, we have a theorist perceiving undertaking tasks that he knows to be impossible, working feverishly in a haze of tobacco smoke, pouring out monstrous piles of manuscript, full of jargon, sometimes badly written and afterwards occasionally mislaid. More than once he mentions that Sartre dozed himself with amphetamines when writing, descending into exhaustion and incoherence by the end



of the day, but that he did not take stimulants when writing fiction.

This distinction between the "literary" and "non-literary" works is misleading. Take the essay on Baudelaire, an "Existentialist" biographical sketch which foreshadows the much more extensive study of Flaubert. The ideas may at times be questionable (e.g. that Baudelaire "deliberately" contracted syphilis), but they are argued in some of the most stimulating discursive prose by any writer of the time. Here, as elsewhere, Sartre communicates the excitement of a brilliant and cultured mind tackling the central problems of existence. Seeing individual freedom as crucial to understanding, he exercised his own freedom to change his opinions, to abandon "literature" and, as he saw it, to transcend individual experience. Hayman clearly regrets that the man chose to give up writing novels, as well as to undermine his health by overwork and addiction, but this regret implies a criticism of Sartre's determination not to become ossified, or reified, as some kind of "literary god" and, in that enterprise of liberation from the pressures of society and upbringing, he succeeded. Only death could make him safe, uncontroversial and predictable.

For Hayman, this was "a betrayal of his readers and his intentions, com-

bined with a more conscious betrayal of literature and his talent for it". This distinction between the "literary" and "non-literary" works is misleading. Take the essay on Baudelaire, an "Existentialist" biographical sketch which foreshadows the much more extensive study of Flaubert. The ideas may at times be questionable (e.g. that Baudelaire "deliberately" contracted syphilis), but they are argued in some of the most stimulating discursive prose by any writer of the time. Here, as elsewhere, Sartre communicates the excitement of a brilliant and cultured mind tackling the central problems of existence. Seeing individual freedom as crucial to understanding, he exercised his own freedom to change his opinions, to abandon "literature" and, as he saw it, to transcend individual experience. Hayman clearly regrets that the man chose to give up writing novels, as well as to undermine his health by overwork and addiction, but this regret implies a criticism of Sartre's determination not to become ossified, or reified, as some kind of "literary god" and, in that enterprise of liberation from the pressures of society and upbringing, he succeeded. Only death could make him safe, uncontroversial and predictable.

For Hayman, this was "a betrayal of his readers and his intentions, com-

Grades, and other gremlins

All About GCSE. By Maureen Mahley, Chris Emerson, Ivor Goddard, Shirley Goodwin and Ron Letch. Heinemann Educational £3.95. 0 435 80615 7.

Many pupils and teachers, not to mention parents, governors and employers, feel that they have been pushed somewhat naked into the GCSE examinations chamber. Information has been fragmented, they say. And when details have been provided, they have been clouded by confusing terminology.

Through the pages of *All About GCSE*, help may be at hand. Set out in a clear question-and-answer format with a glossary of terms at the back, this little book is readable (although not riveting), balanced and refreshingly free of cumbersome illustrative examples. It is written by five people who are actively involved with the new examination, and it draws on a range of pamphlets, publicity leaflets and government documents.

It begins right at the beginning with a definition of GCSE and moves on to grapple with gremlins such as grade criteria, norm and criterion referenced grading and the relationship between GCSE and GCE/CSE grading scales.

It tackles the subjects available, the syllabus variations between examination groups and the positions of modular courses, double subjects and limited grade syllabuses. There is concentration on coursework and delving into differentiation. And there is a useful section on GCSE for adult, private and overseas candidates.

It is difficult for authors to ensure that all their points remain pertinent when their subject is still evolving.

These sections on preparing teaching and organizing classrooms may come across as a little trite to those who have been knee-deep in the practicalities of GCSE for some time.

But the book is aimed, after all, at anybody who is interested in education. For the cognoscenti, its value will be as a reference tool. It may concentrate on the facts, but it does also make an attempt to place the examination into the wider educational context. It asks whether there will be progression from GCSE courses, and whether the examination will be suitable preparation for sixth form courses such as the Certificate of Pre-Vocational Education, for further education, for university and employment.

The authors are reluctant to take any firm stand, preferring to list arguments for and against, but they stress the importance of flexibility.

In a section on the future, they say the divide that now occurs at 16 is becoming increasingly artificial and that with the extension of YTS from one to two years, most adolescents will be continuing in some form of education or training until the age of 18. In these circumstances, education for the 14 to 18 age group must be viewed as planned as a continuum with no stage naturally leading to the next. They say, "Some aspects of the GCSE will fit ill into such a continuum and modifications may soon be called for."

Indeed, the new exam's ability to adapt to new needs will in their view be crucial. "Otherwise, it may not have a long lifespan and those Examining Groups which refuse to change will, like the dinosaur, become extinct."

Sue Surkes

lingo

Da-da

When my young son was just six months old, he uttered his first recognizably consonantal sound—"da-da". I had a witness to his precocity in that I was in my local opiclan at the time and the Indian receptionist promptly informed me that in her language, Hindi, "da-da" means grandfather. Interestingly, my mother insists on being called "nana", another Indian word (for grandmother) in preference to, as she sees it, the more geriatric but English "granny".

We don't have to seek very far for indispensable loan words from the Indian sub-continent (and its almost 200 different languages) though the two already mentioned may not be loans at all but simply an indication of the relationship between the Indo-European languages.

However, my husband's favourite beverage, a cup of "chai", is a direct loan from Hindi, probably brought back by the "other tanks" whose tour of duty included the sub-continent. The "chai wallah" was, indeed, one of

the few natives permitted to enter the barracks to which the "other tanks" were largely confined.

"Chai" is now a working-class, slang expression and we do have an alternative word for it, but without the British connotation with India, "pyjamas" would not have supplanted the decency nightshirt as a more manly and comfortable night attire. "Polo" is a game entirely unknown in Britain, as was that fine cotton fabric Mousil called "muslin". "Chloro" (from Tamil), a cigar open at both ends, was a hitherto unforeseen development of the "stinking weed". Such borrowings are understandable; indeed, they seem quite rational. Loan words accompany new artefacts or objects to a new home. Nothing could be more sensible.

But what prompted the adoption of "bungalow" (Hindi "house") for a single storey dwelling? It wasn't such things didn't exist in Britain? Most agricultural labourers' cottages, especially in Scotland, were called "but 'n ben", all on the ground floor. And why, too, did we introduce "dinghy" into English? Small rowing boats were common enough in Britain before John Company at all spoke English language with its inflexible drive to monosyllabism prefers one word rather than three, even if that word is of foreign origin.

Linda Hall

Plotless picture

The Madhouse. By Alexander Zinoviev. Gollancz £12.95. 0 575 03730 X.

Once the Professor of Logic at Moscow University, Alexander Zinoviev finished his Swiftian satire on Soviet society, *The Yawning Heights*, in 1974. Calling the country Ibsen, but setting down the facts about Soviet Russia, he was able to make sociological reports like deadpan comedy, and while many disident Russians still flange all the evils on "Stalinism", he exposed the complexity of the victims in the system that oppresses them.

The Russian edition of the book appeared in 1976 and two years later Zinoviev followed *Solzhenitsyn* into involuntary exile. *The Madhouse*, which was published in Switzerland during 1980, comprises 770 pages of small type. Zinoviev gradually collected with the English translator, Michael Kirkwood, on abridging the

book but at 400 pages it still seems too long.

The truth is that it would seem too long at 200. A plotless, amorphous, humourless accumulation of short sequences, it centres on an unnamed character known as the Junior Research Fellow (JRF) who has stolen conversations with his Second Eye. Other characters include the Ego-operative (Op), the Teacher, the Engineer, the Poet, Trotsky, Stalin, Lenin and a number of given names. What there all have in common is a pudding-like lifelessness. Zinoviev's picture appears to be that anything which can be said against the Soviet Union is worth saying. One emerges from *The Yawning Heights* almost convinced that Soviet Communism must be quite different from what he makes it out to be. Unfortunately this picture is probably accurate.

Ronald Hayman

Acts of faith

Religion In Life 3: Worship, Ceremony and Rites of Passage. By John R. Bailey. Schofield and Sims £3.65. 7217 3035 3. Celebrations. By Celia Collinson and Campbell Miller. Edward Arnold £3.50. 7131 7441 2.

Following the path taken by its predecessors comes *Worship, Ceremony and Rites of Passage*. It is the third of Mr Bailey's five-part secondary RE course ("the books to be used in any order") and has the same lavish use of colour.

Arranged in six sections (one for each of the major world faiths), it illustrates the main public and private acts of worship of those faiths and also the ceremonies associated with birth, adolescence, marriage and death. As an anthology of photographs, it will be invaluable and all are superbly reproduced except (a neat and subtle theological joke, this) that of an Anglican family service which is slightly out of focus. The pictures encourage browsing and repay study; they make religion interesting but do not concentrate only on the glamorous. Indeed, this must be the first textbook (unless you know different) which illustrates circumcision. (It's all right, men: there's not a lot of blood.)

The text is "deliberately brief and simple". It will, therefore, need fleshing-out by the teacher if any topic is to fill a lesson as will the two or three "discussion points" suggested for each topic. These are answered merely by searching the text to the dispiritingly open-ended: "Discuss the idea of prayer."

At the end of each section, there are suggested "Things to do". Not all can



RELIGION

be easily embarked upon in the average RE lesson. "In small groups, visit a cemetery..." "With the help of your Home Economics teacher... make karah prasad..." "If you have a friend who is a Hindu, ask if he or she would take you home to show you how they worship..."

Although covering much the same ground, *Celebrations* is a very different book. It too has many pictures but all are black and white, taken without flash "out of respect for the communities' feelings". The result is frequently sepulchral. The text too is idiosyncratic in that it reads as though the authors have no knowledge of what they are writing about but are relying entirely on interviews. "There was a service in one of the churches in our community where a 'Christingle Service'... we were curious to know what a Christingle was!" And later, "We had talked to a young person who had been present at this part of Christmas worship, for we were curious..."

While doubtless being sociologically sound, it nevertheless gives the impression that religion is what other people do but since it is human to celebrate there is no reason why we should be surprised if religious people do it too.

David Self

Group work

The New Religious World. By Anne Bancroft. Macdonald £5.95. 0 356 07526 5.

This is the final title in the excellent series, *Religions of the World*. In many ways this volume was the most difficult to write since it is on what critics would call "cults" and others may call "sects". Groups covered include the more established sects such as the Mormons and Jehovah's Witnesses, and the more recent newcomers Hare Krishnas and the Unification Church. In addition chapters are devoted to the Rastafarians, Baha'is, Rajneeshis and Transcendental Meditation. As the introduction states, the book is not about whether people are right or wrong to join such religious groups, nor is it about whether the new religious movements themselves are right or wrong. The book includes comments from members of the groups so that a complete picture emerges. This is a most welcome book as well as an attractive one, and should help both teacher and pupil to come to terms with some of these new religious groups.

Douglas Charing



An illustration from I am a Rastafarian, one of the titles in Franklin Watts' My Belief series which looks at different beliefs through the eyes of a child. £4.95 each.

If only...

Leaders of Religion: Muhammad. By Dilwyn Hunt. Oliver and Boyd £2.00. Stories of the Prophets of Islam: 1. From Adam to Hud, 2. Salih and Ibrahim, 3. Ismail and Ya'qub, 4. Yusuf, 5. Musa, 6. Daud, Sulaiman and Ayub, 7. Yunus, Yahya and 'Isa, 8. The Early Life of Muhammad, 9. Muhammad the Bearer of Islam. By Abdul Rahman Rukaini. Macmillan £3.95 and £1.75 each.

If only... If only Dilwyn Hunt had worked on his book in close cooperation with a perceptive Muslim of the creative calibre of Rukaini.

If only Abdul Rukaini had laboured effectively alongside a British teacher with the understanding of how children develop and respond that is implicit in Hunt's book.

Each author's work has, of course, its own strengths: Hunt's book is formal, careful and orderly, with varied assignments as follow up work to eight of the nine units that make up the book. Pupils are gently probed as to "What have you remembered?" "What do you know?" "What do you think?" Rukaini's series is evocative, detailed and replete with story both of figures well known to us from biblical legend and also of less familiar prophets such as Idris (Enoch) and Salih. The common threads that bind them all into an orderly sequence from Adam to Muhammad are clearly evident without being forced, at least once one cracks the code and identifies Musa as Moses, Ayub as Job, Yunus as Jonah, Yahya as John Baptist and 'Isa as Jesus, etc.

But if only... Hunt's work were touched by Islamic sensitivity, or offered insights into the spiritual nature of the religion of the Prophet... its illustrations, drawn by Joanna Troughton, were more meaningful and less likely to cause offence to Muslims. It avoided seeing people such as "the rich merchants of Mecca" in terms of black and white... the drama rang true to an Islamic pattern of family life (instead of showing a barbed-wire woman in the open air exclaiming to a rich merchant "Shut up Abu Jahl!").

And if only Rukaini had mastered the art of presenting stories in a manner that would go down with modern young people... his designer and artist, Abdul Razak Abdallah, had drawn less emotional scenes that might appeal to children who reside elsewhere than in the house of Islam... there were less plotting and violence, and more positive evidence of beauty and purpose in stories as significant and informative as these.

As it is, the work of both authors will find a limited market; Hunt's book in certain schools where there are few Muslim pupils and little pressure from the local community for sympathetic insights and accuracy, and Rukaini's series in mosque schools and perhaps in primary schools where the percentage of Muslim pupils is exceptionally high. But neither is likely to meet the needs of the main market in the state school system where effective collaboration between committed Muslim and dedicated educationist is the likely combination for future success.

Peter Woodward

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Education For Some

The Educational & Vocational Experiences of 15-18 year-old Members of Minority Ethnic Groups

A report on a research project for the Department of Education & Science, directed by Professor John Eggleston

by John Eggleston, David Dean, and Manda Asghar with an afterthought study by Cecile Wright

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Now in book form: The 'Eggleston Report' which attracted massive media attention when released by the Department of Education and Science in October 1985. For the first time a detailed and sensitive account of the attitudes and expectations of black young people, their teachers and career officers is available. It has been recognised as a ground-breaking study by all involved in multicultural education. The Times Educational Supplement in its leader comments on 25th October 1985 wrote:

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It demonstrates beyond a peradventure that racist attitudes and practices are currently doing much to hinder the education of Afro-Caribbean pupils. It also shows that many of these pupils are coming to see academic qualifications as an essential defence against the discrimination they fear they will meet in the labour market.

It identifies the point at which the problem intensifies - the third year of secondary school - and it lays bare the cycle which often begins, with prejudice on the part of the teachers becoming a self-fulfilling prophecy, so that black pupils lose interest in work and accordingly get themselves assigned to the lowest streams.

In Multicultural Education Review Spring 1986 editor David Ruddell reaffirms this: The Eggleston Report provides the empirical data which both Rampton and Swann neglected. Eggleston's data is quite damning. It provides 'proof' of the extent to which racism operates, and makes a series of clear, useful recommendations. It is to be hoped that the D.E.S. and the L.E.A.s will take this low-profile Report seriously, we might expect them to take steps."

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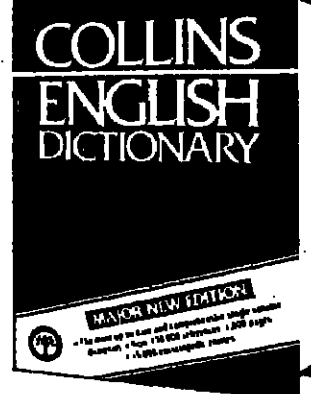
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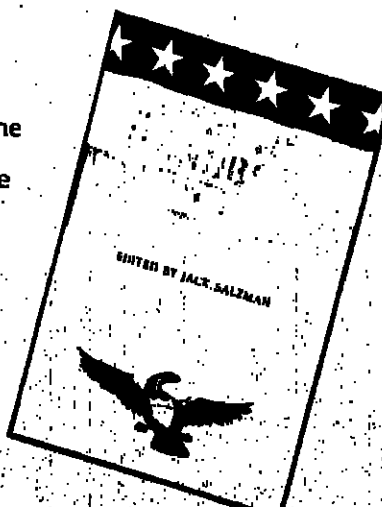
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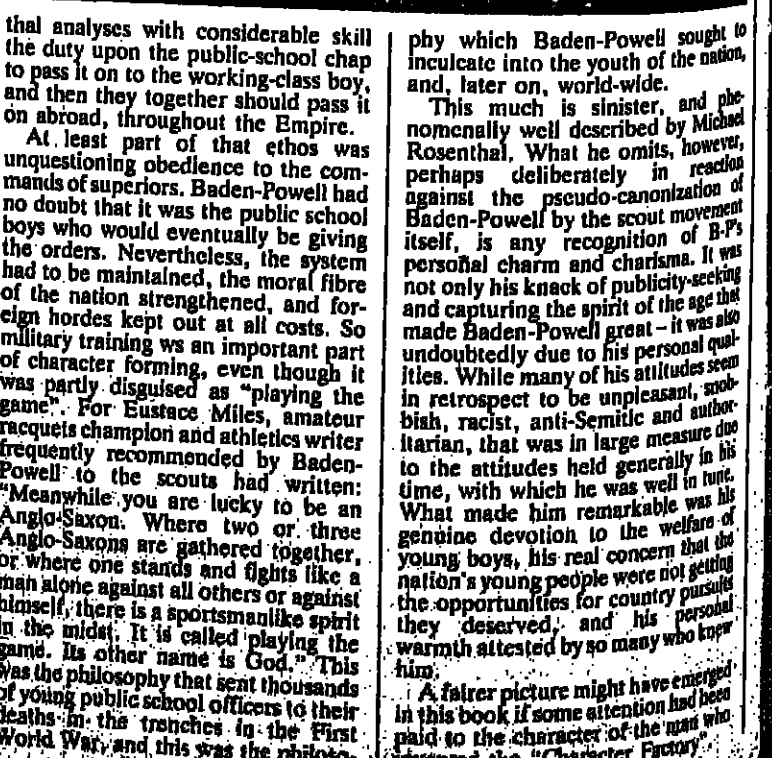
Was it their low intelligence? But



A visit to my local toy-shop is always reassuring. There, dinosaurs – *Bromiosaurus*, *Siegosaurus*, *Tyrannosaurus*, take your pick – still plainly, at least in the imagination of the young, Rule. And that is more than OK by me.

Moral fibre

But the war-loving part of Baden-Powell is integral to his idea of British superiority, to his faith in the great moral worth of the Empire and, indeed, in the immense benefits the Empire and its emissaries could bestow on "the natives" throughout the world. Baden-Powell believed that the great public school ethos of playing the game was something which all British schoolboys should be taught. Rosen-



Television

The medium assumes lazy viewers and, like Walter Spencer, broadcasts information about other cultures in the light of its own perceptions. You might think of an investigation of Chinese television (Beijing's *China Daily* TV, 1982, October 8) would provide something of a critical standpoint on our own. Not a bit of it. While avoiding a crude "look at these funny foreigners" approach (see *Clive James on Television*), it thinly disguised its preconceptions. It was a warning that the Chinese are supposed to watch and be patronized about the best features of the television they have got (eg the "fearless, incorruptible" consumer programme). Metaphorical language suggests a major barrier to Western understanding of the country. It is easy to read a literal text and to see everyday language of Chinese debate as wildly exaggerated, "hectoring rhe-

How do you tell them that? The sense of insecurity underlying those security-service actions comes from a time when men could stand up in court and condemn themselves to death by falsely confessing their treachery to the state. Laszlo Rajk, Hungarian Minister of the Interior, was executed after his arrest in 1949, and rehabilitated in 1956. In 1956, Istvan Tudos told me, "You Lose My Father?" RTV, (October 7) his son investigated the circumstances and explored the motives behind his father's confession. The most plausible explanation is that to avoid further torture, Rajk convinced himself that his confession and death would advance the Communist cause. When the Stovani, God of Order and Justice, of Communist Hungary has much regard for truth or reason.

Ruth B. Ross

Death in the afternoon

Goya's 33 etchings are a brilliant account of this bloody – and to animal lovers blood-curdling – sport. Goya's dramatic and technical mastery is supreme. The etchings were made in 1816, almost at the same time as his even

more famous masterpiece, "The Disasters of War", to which these two illustrations bear an uncanny resemblance. Whether blood is shed between man and man or man and beast makes little difference to Goya. In both cases death is the result.

In complete contrast, Picasso's 26 illustrations for Pepe Llo's book, *La Tauromachia*, published in 1959, have a joyous balletic elegance. The sketchy figures, delicately executed in stylized black and brush, resemble the neoclassical black hunting figures on painted vases from Valencia 3,000 years ago.

Unlike Goya, who worked for years on each series, Picasso covers the game from beginning to end in one afternoon. And whereas for Goya death is the focus, for Picasso it seems almost incidental.

—Sandra M. M...

Music with the maestri

Next year's professors include Tamás Várady and Andras Schiff (piano), and Frankl Postel (double bass). Students are equally distinguished; Nigel Kennedy, Steven Isserlis and the winner of this year's Carl Flesch Violin Competition, Anthony Marwood, have all been through their paces at Cavendish Cove.

Applications for master classes are invited from students of all ages and backgrounds. For more information, contact the school at 01223 334444 or www.cavendishcove.com.

The selection for the open chamber music seminars in the autumn is made on the basis of personal recommendation from the professors, and the final decision is by committee. Once the students arrive they can to some extent choose who they want to work with and which instruments will be performed on the four. The atmosphere at the centre changes at the chamber music sessions, and students sometimes find that working alongside their professor can be daunting.

"They have to learn sovereignty over their instrument. It's not enough simply to be technically brilliant," says Hilary Behrens expands the philosophy behind Prince's Coves. "Younger players have direct experience of being coached by masters who may have worked with the composer himself." He cites the example of Sándor Végh, whose

The final concert of the autumn tour – the culmination of the open chamber music course – gave the Wigmore Hall audience a glimpse of the Eastern European style of string playing in practice. No yawling in vibrato, plenty of vigour in the Bartók "Contrasts" for violin, clarinet and piano, and in the Dvořák Quintet in E flat. Opus 97 evenly balanced performances by viola and cello that were never dominated by the top strings. The strings and piano were joined by

The Government's support for 'centres of excellence' has dealt Prussia Cove a favourable hand in the form of a grant from the DES. Hilary Belhrens is delighted that their educational work is at last receiving official recognition.

Philippa Davidson

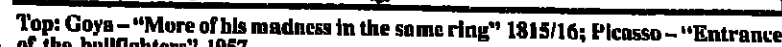
Further details and application forms from The Administrator, IAS, The Linden Hall, 162/8 Regent Street, London, W1R 5TB. Tel: 01-434 1740.

Familiar haunts

Mixing today's theatrical techniques with the tricks and transformations familiar to Druriolomus, director Hal Prince keeps the pot boiling, springing one surprise after another. Maria Bjornson's sumptuous settings and gorgeous costumes, atmospherically lit by the Bridge, Gillian Lynne's delightful pop pieces, and the use of a huge cast of strong actor-singers ensure attention and willing suspension of disbelief.

Sarah Brightman can't act but sings the ingenue beautifully; Michael Crawford is splendidly menacing and pathetic as the Phantom, though Mary McCormack's "Phantom of the Opera" is more than a little over-the-top.

It is a thrilling, pleasurable melodrama with theatrical sleight-of-hand to dazzle effect.



Melodrama and thrilling effects provide high points in *Miscellaneous* under John Caird's delightfully inventive direction. Subtitled "A debate in *on sitting*" and described by one of its characters as "eternal cackle," it is a three hours-long debate between people drawn to one another in different fashions. *Miscellaneous*.

Hyphat's *Underworld*, daughter to "Tarleton's Underworld," is engaged to marry "Bunny," brassy but offbeat son of Lord Summerhays. Bunny's friend Joey drops in (literally, by a plane-crash) and Hyphat pursues him instead demanding "Papa buy the brute for me." It is a perfect situation for a Shavian battle of the sexes and the generations giving rise to wit and wisdom about education, class, capitalism, socialism and sexism—some of it pertinent now. Certain set pieces in the argument draw great gusts of laughter and when overtalk decries response, Shaw tells us of some lessons by classical dramatic devices: the entries of a Polish nurse, a serobait, and The Man set on Tarleton's assassination. The acting is splendid, with particularly fine performances by Elizabeth Spriggs (Mrs Tarleton) and Mick Ford. It is richly funny but overlong. We stagger out muttering "if only they talked less".

"If only they'd talked more," we say of the characters in *Ghost*, where a son blames himself for his syphilis only to learn that it was inheritance from his supposedly model father. The web of family, social and religious deception teased out by Ibsen still has power to shock in David Thacker's production which provokes more laughter than usual. Most of the laughter is justified by the text which, including actors' improvisation, comes over with refreshing immediacy.

Visiting the grave acts dangerously. Visiting to the moment to provide each line meaning, missing Mrs Alving passionately vibrant instead of the coldly repressed woman usually shown. Tom Wilkinson finds more than moral hubbub in Pastor Manders, suggesting a nervous arriviste struggling to avoid temptation that might lead to public scandal. The rest of the cast is very good with a sexy Regina (Eve Matheson) giving grounds for Oswald's desperate attraction and Engstrand's sordid plans. Clever Young Vic to question today's neo-Victorian valuations with a play which scandalized the real Victorians by declaring openly that silence about sex was dangerous and degrading. Ibsen 1881 is more relevant to youngsters in 1986 than Peter Bruinvels and all his parliamentary, educational and religious cronies.

John James

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ARTS

Life on the launch pad

Cape Canaveral in the Sixties was a heady place, as Chris Ferner recalls

Equinox: Growing up with Rockets. Channel 4, October 9.

A souvenir T-shirt that for outsells the one saying "I (heart) Cocoa Beach" is the other one, bearing the legend "Where the hell is Cocoa Beach?" That's what many engineers in the Fifties said when told they had to work at the Florida missile launching site. Nancy Yasecko's father must have said it. I was saying it myself as I watched her hour-long film, *Growing up with Rockets*. The focus was strongly on Cape Canaveral and the space race.

In an earnest, all-American voice, Nancy Yasecko explained how the space race happened. It was a legacy of the Second World War. Instead of meeting the Soviet Union on the battlefield, the United States would demonstrate its technological superiority by shooting things off in the air. Both sides were aided by German rocket boosters who had been shooting things off at England.

Cocoa Beach had been a sleepy southern town. Cape Canaveral had been its fishing port. Then they became the setting of an expensive propaganda exercise. The place was so remote and unlovely that it wouldn't matter if something dreadful happened there. Or so the Government had thought. First they fired Gus Grissom and his notes. Then this year the Challenger exploded. The significance of these tragedies weren't anticipated 30 years ago.

So, 7,000 aerospace engineers were hired and Cocoa Beach became a boomtown. A village, composed of saloons, and Cape Canaveral became its gold mine. But those engineers had children. Nancy Yasecko was one of them. Children needed schools. Cocoa Beach Elementary became Freedom Seven Elementary in a burst of patriotic zeal. She mentioned the principal, Mr Fritz. His deputy and successor was Mrs Van Ormer, my mother.

An Apollo capsule graced the front lawn of the school. The American flag that was run up on the moon was mounted on the wall of the principal's office. As pupils, we were led outside to witness important launchings. During the Cuban missile crisis, we hung black-out curtains and had red alert drills. We crouched under our desks so that we would know what to do if the Russians decided to drop a bomb on Freedom Seven Elementary. When astronauts returned safe and well, there were parades and flag-waving, and, for me, marching and drilling, and, finally, in the best.

The heady patriotism filled the culture gap. Cocoa Beach had nothing to offer but being 100 per cent American. Years later, in London, I would remark to one of Mr Fritz's visiting daughters about the cultural wasteland of central Florida, and she would reply: "But Chris, you must have forgotten about the Kissimmee Light Opera." She was quite right. I had.

Juvenile nihilism comes through interviews with people attending the Cocoa Beach High School class of 1970 reunion. One girl explained that it was unacceptable to actually be interested in anything, and described herself as a "closet gymnast". Sounds painful. "No one ever questioned what all the flag-waving was in aid of. Nancy Yasecko's parents might ponder it for a moment and talk of gaining the

Growing up with rockets: the author aged 5



world's respect. But her father would say "Hogwash" and go outside to tune up the car, because the real answer was that it was work.

Regardless of the ideology behind it, Cape Canaveral means jobs. It is not just so much a gold mine as a factory. The boom was started when Lyndon Johnson became President and sent contracts to Houston in his home state of Texas. Lay-offs at the Cape meant that overnight a high-paid technician can become a filling station pump jockey, desperate to earn a crust. Challenger cost the lives of seven astronauts, but the livelihoods of thousands more as the programme was cut back.

Nancy Yasecko's film was made two years ago, and stopped at the first space shuttle. It still had a sense of the glowing dream as people watched in amazement at another launching. But it didn't ask the important question: Now that we have the technology, what do we do with it? That would be taking the lid off the nuclear warfare can of worms.

Projects have been scrubbed, as they say at the Cape. The boom is in decline. Freedom Seven Elementary shut its doors two years ago because of falling rolls. The engineers have gone away and pensioners are buying the beach bungalows. That's where the hell Cocoa Beach is.

Radio On the receiving end

Radio has always complained that nobody talks about it on or in the other media. Possibly in desperation it has found the confidence to talk about itself, even critically. A recent edition of *Start the Week* (much improved of late and no longer sounding like an advertising magazine) was devoted to a lengthy discussion about the networks. It began with the American comedy writer Ruby Wax in vitriolic form. Of the Radio 1 jocks: "It's like being doused with a Pepsi-Cola... I picture this bloke with his shirt slit to his navel, he's got wall-to-wall body hair..." Of Radio 2's Derek Jameson: "You must hear the mucus moving around." She found Radio 3 "very funny" with its presenters insisting on pronouncing all the umlauts.

The programme brought us its own commercials for the various networks. Radio 3 was praised in an Orson Welles voice: "Probably the most boring radio in the world." Radio 2 ("with new Bland") was chosen by a housewife from a detergent commercial. "Why not let last chance Radio 2 wash over your brain next time you need oral wallpaper?" Local radio got off comparatively lightly. Mike Hurley from commercial radio repeated that industry's moans about the difficulties of making profits and supported its stream of pop by suggesting that people did not want BBC Local Radio's lists of jumble sales and flower festivals. Mind you, just how poverty-stricken local radio can sound might be judged from a moment on BBC Radio Norfolk last week. A listener had popped in to give a fiver to the teatime presenter. He sounded as if he was keeping it.

Start the Week was also joined by Laurie Taylor "as he tends to join every other programme on Radio 4" to promote his new series *The Radio Programme* (Radio 4 LW, Thursdays 9.30am, repeated Sundays 4.30) which

intends to take a critical view of radio to show how programmes get made. The highlight of the first edition was an explanation of how you get a microphone to work under water. You put it inside a well-known rubber product. When Drama Department tried it at a certain depth, the well-known rubber product split.

This promises to be a useful series, particularly if it can overcome its anxiety that it might not be interesting. Three other specialist magazine programmes have this self-confidence. *Law in Action* (Radio 4, Fridays 8.20, repeated Sundays 9.30pm) is not afraid to open up with a sober examination of whether restrictions on the right to trial by jury would speed up (and therefore improve) justice. In quite a short time, Joshua Kozenberg and his producer have made this into an informative (and seemingly independent) insight into a professional "shop". I loved the New Zealand lawyer's response to a suddenly simple question. A long pause, then: "Would you put that to me again?"

Just as I suspect *Law in Action* must be a useful way for lawyers and law students to keep up-to-date, so *Science in Action* (World Service, Fridays 16.15GMT) seems (to the layman) to be an excellent weekly up-date on discoveries and developments. Must you, it doesn't have the frantic pace of *Money Box* (Radio 4, Saturdays 12.30, repeated Mondays 10.00am). So, let that I don't understand it, it's just that I need time to understand it. A recent edition closed with a story of our times. A 13-year-old girl has got 100 bank and building society accounts, opened mainly for the freebies. Among those finance houses she patronizes are the City of London Building Society, a bank in Gibraltar and the Graveland branch of the Punjab Bank.

David Sell

Victory on points

The Ona performance to mark the UK launch of Dance and the Child International, which took place at the Logan Hall of London University, was a stunning evening of skill, imagination, flair, and energy. From a Suffolk primary school sword dance to the Beverly School of Dance's adult *Tri-bute to Astaire*, from the deeply satisfying *Sea Sketches* (to music by Britten and Saint-Saëns), to the Junior Ballet Class of the Central School, and culminating with the powerful and elaborate piece by the Harehills Youth Theatre Dance Theatre, the evening was a huge tribute to the dance teachers and the students (those who are allowed near dance) from many parts of the country. Everyone who was there will have their own favourite moments of the evening: mine was the performers from the South Liverpool primary schools in *The Creation*.

The following day saw a comparably stunning performance by students (including one non-Indian) of *Prayer Pawar* of the Academy of Indian Dance at North Westminster Sunday Theatre. They demonstrated beautiful control, delicate nuance, grace and skill. The highlights included a danced descriptive of Lord Krishna's birth, Tagore's poem "Anando Lake", and three eight-year-olds in a delightful dance to Kathak rhythms. The older students were real virtuosos. This new studio theatre formed a suitably intimate setting.

Michael Marland

Rupert Christiansen's *Prime Dances* history is to be published next week by Penguin (£3.95). This enjoyable book surveys a time of extraordinary women spanning 300 years of musical history, charting their turbulent relationship with the public and the splendour and misery of their arduous job.

Top 21

The Book Marketing Council's Teen Read promotion reached its climax on Monday with the announcement of the 20 most popular titles chosen from the list of 100 books most borrowed and bought by teenage readers. In the end, the 20 turned out to be 21 so furious, apparently, was the argument among the teens, that one was added. The list, which is a dozen teenagers' selections, is a carefully selected to represent the opinions of teenagers throughout Britain. We have to take the BMC's word for that, though in the publicity photo two of the teenagers seem to be girls, with the ethnic minorities only minimally represented.

But to the list. It is wide-ranging, including several books written or marketed for adults. *Madam Mole*, *The Book of David*, *The Galaxy*, *When the Wind Blows*. There is a surprisingly even

balance between what might be called "leather approved" authors (Joan Lingard's *Across the Barbed Wire*, Margaret Mahy's *The Changeover*, Neil Lawrence's *Children of the Night*, Michelle Magorian's *It's My Life*, Tom, Robert Leeson's *It's My Life*, Susan Cooper's *Dark is Rising* and Tolkien's *Lord of the Rings* trilogy all figure) and less literary or more controversial titles. *Pan's* appears three times and there are three from the *Sweet Dreams* series. But there is also a bonding school story, *First Term at Trevelyan* by Anne Digby. Having now discovered what teenagers like best, the BMC are all set to promote just those titles which seem to be selling quite well already. That's show business.

Heather Nash

Home-made history

Mary Cruickshank visits a Yorkshire home with a difference

Clarke Hall, a 17th-century farmer's house on the outskirts of Wakefield, must be one of the most hospitable homes in Yorkshire. Every week it welcomes groups of school-children in a variety of roles. They may be pilgrims on their way to the New World, royal children fleeing from rebels, wayfarers and wandering minstrels, or possibly country cousins invited to share in a Michaelmas harvest feast or Christmas celebration.

Their journey into history starts well before they visit the Hall, with detailed preparation of the day's theme. When Royston Meadstead junior school in Barnsley wrote to Master Benjamin Clarke of the "misfortune that swept away our village in a terrible fire," the reply (dated September 22, 1680, the year the house was built) invited them to "take meat and drink, give help where it be needed and if there be time, perchance to sing and dance, for we are wondrous fond of merriment."

Tony Stevens, the director of Clarke Hall, and his assistant, Margaret Beaumont, fall easily into the roles of Master Benjamin and Mistress Priscilla Clarke, as the children arrive at the Hall in costume. "Pray bolt the door behind ye," instructs Master Benjamin, a bluff and genial farmer and steward to the Duke of Norfolk.

The first hour at the Hall is an important time for orientation and building relationships. As well as unfamiliar surroundings, the children are adjusting to a different-sounding language. The relaxed conversation that develops between the "Clarke" and the children touches on many aspects of life in the 1680s—domestic matters, local gossip, the plague, medicines, music, the King, the Great Fire, and so on. "We're scattering seeds," explains Tony Stevens. "Every child will grasp something, and many of them will remember a lot. It's up to the teacher to pick things up afterwards."

After a tour of the house, the Meadstead children divided into groups to cook lunch—roasting chickens on the spit, churning butter in the dairy and preparing the table. Others made pomanders and lavender bags and embroidered samplers. Mistress Priscilla helped with spinning and weaving in the upstairs loom shop and a group of musicians practiced rounds and recorder playing at the spinet in the great chamber. Some tried writing with quill pens, while others played bowls and 17th-century games in the garden.

The balance of original and repro-

duction furniture and equipment at the Hall has resulted in authentic surroundings with enough reproduction items that can be used by children without fear of damage. Great care is taken in the design of replicas: the three-handled kitchen mugs are made from local clay and the sturdy kitchen plates from wood available in the neighbourhood.

The Hall's greatest asset, however, is its staff, who recognize that the complex teaching situation they have created requires great sensitivity and professionalism. Teacher preparation is considered vital and frequent in-service courses are held at the Hall. At least one preliminary visit is insisted on to develop the theme of the day and to discuss preparation and follow-up work. A high adult-pupil ratio is recommended, which means class teachers have to prepare other accompanying adults. A well-equipped classroom extension to the Hall contains a wide range of resource material.

Among the notes available for teachers are biographical details of the family at Clarke Hall in the late 17th-century. They describe many of the incidents and people that are referred to in the role play between Tony Stevens and Margaret Beaumont. Among them is Priscilla's sister, for example, who married a papist related to a priest, much to the dismay of her family. "All the information we give in role is true—even the names of people in Wakefield," says Tony Stevens.

Also useful for teachers are notes describing 17th-century customs and ceremonies for different times of the year—October fairs and feast days, such as St Faith's Day and St Luke's Day, and Hallow E'en rituals for the end of the month. And there is practical advice on planning the day and using the kitchen.

Teachers are encouraged to experiment with different ways of interpreting a visit. A sixth-form art group from St Joseph's college in Bradford heightened their appreciation of 17th-century Dutch genre painting, through working a contemporary interior. Their teacher described it as a unique educational experience "in that it was a total experience". The role play vividly conveyed some of the social and moral attitudes of the time and the students were able to experience at first-hand the intimacy of the interiors and the special quality of light streaming through the millioned windows. At the same time home economics students gained an insight into 17th-century domestic life as they baked

SCHOOL VISITS



bread and prepared a meal in the kitchen.

Other schools may choose to focus on scientific discoveries of the period, the work of Sir Isaac Newton, for example. They conduct simple experiments with light and magnets, or investigate the medicines of the day.

There are also imaginative examples of the ways in which schools with multi-ethnic classes adapt a visit to the Hall. One teacher, Mrs Audrey Haigh, who was then teaching at Mount Pleasant junior school in Huddersfield, felt it would be inappropriate to dress her pupils, 75 per cent of whom were Asian, in Puritan costume and ask them to be English children in the 17th-century.

Instead she invented an ingenious narrative whereby each child arrived at Clarke Hall with experience and artefacts from their own cultural back-

grounds. Her story, *The Day We Sailed to Wakefield*, started in Delhi in 1665 with the Grand Mogul ordering his servants to prepare for a pilgrimage to Mecca. A series of misadventures diverts the ship to London, then in the grip of the Great Fire, and from there to Hull. Meanwhile the company has been joined by sailors who have run away from the sugar plantations to Jamaica and Trinidad, some Irish Royalists and English Quakers. It was the Quakers who told the company of "One Benjamin Clarke, a commissioner of the Lord of Norfolk, who welcomed people of all religions to his farm."

The theme was developed in detail (particularly through drama) well in advance of the visit and at its heart was comparing and contrasting life in the east and the west and in the 17th and 20th centuries. Remarkable, simply.

ities were found in methods of cooking, agriculture, textiles and metal working and the children were fired with enthusiasm and pride in their own heritage.

Some visits to Clarke Hall inject an unexpected incident or crisis into the day's activities, that presents the children with an opportunity to explore the practical and moral consequences of different courses of action. Perhaps a dissenter is found hiding in the priest's hole; or one of the household talks sick with the plague, or is accused of witchcraft.

Ray Crossley, head of Birdwell junior and infant school in Barnsley frequently spends his lunch-hour as the Duke of Norfolk, or a rough Irish peddler or a beggar who unexpectedly arrives at the Hall. "It's sheer theatre,"

continued on following page

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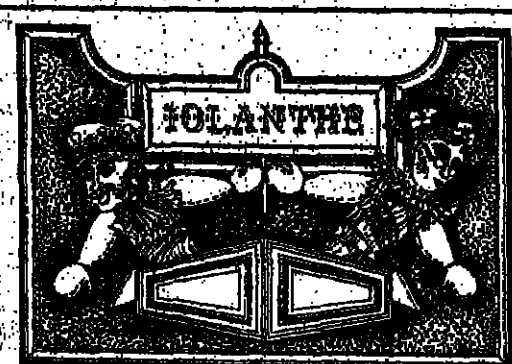
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Scottish Opera

The 'A' Team

Sir, — I wish to point out several inaccuracies in the article "Celebration" in your issue of October 3:

Our address is 95 Tottenham Road, London SW17, not Tottenham Street.

We do not work with the Korean community in Tower Hamlets.

Rajpur is a small town, but it is an oversimplification to describe it as "ruled by the mayor and his cronies".

Our show was not seen as subversive and we did not encounter censorship.

Another Sylhet production of the Pind Piper story in Bangladesh encountered censorship problems, which is

fundamentally an anti-Islamic. There isn't the same feeling in India and on our production my co-director Habib

Tamir is a Muslim, and the members of the company are from Muslim and Hindu backgrounds.

ELIZABETH LYNCH

Director, The 'A' Team

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Arts in action

Bristol Festival for Children: October 20-25
Festival Office, Colston House, Colston Street, Bristol BR1 5AO
Tel: (0272) 276483

This is the third festival of its kind to be held in Bristol, and three years of practice have enabled the organizers to pull off some impressive feats, combining local talent with performers of national and international reputation, and putting professional artistry at the service of absolute beginners.

A three-stage project on folk music for 400 young listeners (and potential composers) culminates in a concert with the Bournemouth Symphony Orchestra at the Colston Hall. St George's, Brandon Hill, provides a platform for musicians from Avon schools, besides echoing to the sound of labor, tinblat, psaltery and dulcimer in a costumed recital of medieval and Renaissance tunes. The Yetties from north Dorset set the Victoria Rooms vibrating with traditional dances, to be followed by the rhyme and rhythm of two unconventional poetry readings for the over-sevens: John Agard's Caribbean "Word Magic" and "Jelly Pie" from Brian Patten and Roger McGough.

Audience participation is encouraged by the musical shows of David Wood and Toni Arthur, while puppets from Finland and Poland will appeal to children as young as four. Films to be shown at the Watershed cinema include a spoof Western and experiments in animation on the theme of evolution, all produced by teams of youngsters. Designed specifically for teenagers are presentations of innovative ideas and techniques in jazz, craftsmanship and contemporary dance.

All these events, and more, take place at celebrated venues in the city centre and are listed in "The Festival Storybook", luminously illustrated by Michael Foreman, and punctuated with poems from primary and secondary pupils (price £1.50 from the festival office).

Still more noteworthy, perhaps, are the workshops, plays and storytelling sessions in community halls and schools which are remote from monuments of civic pomp and pride, and which cater, in some instances, for the disadvantaged. These extensions of the festival programme engage the energies of staff and children during weeks of preparation, and represent a commendable effort to fulfil the Festival Director's declared aim: "to work towards the regeneration of Bristol's inner city and suburban estate areas." Ticket prices are deliberately low.



Entry to the exhibitions, the book fair, and the Rapping Competition is free. This last coincides with the publication by Macmillan of Gini Wade's verse tale of "Curly the Hip Hop Cat" (£2.25) whose break-dancing career, recorded on cassette, marked my first encounter with the euphoric optimism of "nursery rap".

"When the world seems a mess, put on your dancing shoes. Boogie down, everybody, chase away those blues."

Marion Glastonbury

Star trap, thunder run and ghost glide

Children have a taste for improbable enthusiasm, and they would not forget a visit to David Anderson, proprietor of the "On Stage" Theatre Exhibition in Exeter. His display is small, but a trip which also took to the nearby Maritime Museum or the modern Northcott Theatre a mile away on the University estate could make a good day out for schools in the South or West.

Mr Anderson has served his time as stage hand, director, and head of drama in an Essex comprehensive, where he used to make ingenious models to illustrate stage effects and the history of the theatre. He has filled the cellar of one of Exeter's riverside warehouses with such models: theatres from Greek, Georgian and Victorian times; the Globe; a mystery play on its cart in a medieval town, and so on. He'll tell stories or lecture to young audiences as interest or academic demands dictate.

Children will be especially intrigued by the wind machine ("Please Touch"): the Star Trap, through which actors either erupted on to stage or did themselves an unfortunate injury; the Thunder Run: from a Hamburg Theatre with which Mr Anderson himself once generated six exhausting

storms per performance; and, the Proprietor's evident pride and delight, one of the only two working models of the Corsican Trap or Ghost Glide (Mr Anderson made them both). The Glide was devised for Charles Keen's 1852 production of *The Corsican Brothers* at the Princess Theatre, London. The piece was played regularly until 1913, and the secret of the Glide was passed on by word of mouth to stage carpenters all over the world. Children might well wonder how a ghost can gradually emerge vertically through a stage floor which seemingly has no apertures in it, passing from right to left without moving its feet as it does so. All will be revealed before their very eyes as Mr Anderson demonstrates his half-scale model.

A visit might take half-an-hour to an hour, and can be tailored for any group, from infants to undergraduates. Parties of 15 or so can fit in at a time (but the others could Cox and Box with the Maritime next door). Party rates are 25p. a head.

Geoff Fox

"On Stage" Theatre Exhibition, Cellar 2, The Quay, Exeter EX2 4AP. Open Daily except Mondays, 10 a.m. - 5 p.m. Tel: Paignton 525444.

continued from previous page

he says. His fourth-year pupils who visited the Hall as infants still talk about it. "It's a total learning experience that teachers can draw on for a long time afterwards."

Clarke Hall is a theatrical stage, but one with a strong educational base. Its concern with social education is evident in the standards of behaviour expected in the house and in the values embodied in the roles of Priscilla and Benjamin Clarke. When children ask of some event in the past, "Was it

before or after Clarke Hall?" they have discovered not only a landmark in history, but a turning point in their own personal development.

Mary Cruickshank

Clarke Hall, Aberford Road, Wakefield, was purchased by the Wakefield County in 1971 and opened for educational use in 1975. It is now administered by Wakefield Metropolitan Council on behalf of Barnsley, Bradford, Calderdale, Kirklees and North Yorkshire authorities.

Old and new

Hugh David recommends some Christmas outings

There is nothing particularly Christmassy about the Prince of Wales's preoccupation with hairy knees - but then neither Cinderella nor Aladdin is intrinsically seasonal either. All three, however, are set to delight many thousands of children as the end of the year approaches - the pantos in church halls and youth clubs as well as "proper" theatres up and down the country. His Royal Highness's Highland fantasy *The Old Man of Lochnagar* in an extensive Arts Council tour mounted by Whirligig.

David Wood, a dependable name in children's theatre if ever there was one - is responsible for the stage adaptation, and promises that current audiences will get more out of *The Old Man* than even Prince Andrew and Prince Edward, for whom it was originally written. As far as he knows, they merely read it. Wood's adaptation has a full musical score and *Playschool's* Iain Lauchlan in the title role. It has been out on the road since September, but there is still time to catch performances in Hull, Norwich, Northampton, Birmingham, Cambridge, Buxton, Oxford and London, where *The Old Man of Lochnagar* plays at Sadler's Wells Theatre for a week beginning on November 11.

offering. The Greek writer Xenia Kaloyeropoulou has come up with *The Fantastic Voyage of Uly Slabad*, a conflation of the stories of Ulysses and Sinbad. It opens on November 1 and continues until January 4.

Gone is the time when Royals, Palaces, Festivals or New Theatres could afford to mount their own pantos. These days nearly all the major ones up and down the country are produced by one man. Paul Elliott of E&B Productions is responsible for no less than 10 this year in theatres as far apart as Aberdeen and Bournemouth. They are the high-kicking, all-singin', all-dancin' Number One shows with household-name casts and whole-some, family scripts.

There are versions of Jack and the Beanstalk at the Palace Theatre, Manchester (with Russ Abbot) and Wimbledon. The Theatre Royal, Lincoln has Dick Whittington and Richmond (always dependable for an outer London show) a glittery Cinderella with Rolf Harris and Annette Rice. At His Majesty's, Aberdeen, by the way, it's Snow White with Ted Rogers and Honor Blackman, but when it comes to stars Bournemouth's Aladdin beats everyone, boasting Anita Dobson from *EastEnders*, Derek Griffiths, Jef-



Iain Lauchlan as the Old Man of Lochnagar

Among the other children's shows touring the country in the immediate pre-Christmas period are dramatizations of two of CS Lewis's Narnia chronicles. For the third year running, an adaptation of the best-known, *The Lion, the Witch and the Wardrobe* will be packing the Westminster Theatre in London from November 24, after a week's preview at the Festival Theatre, Malvern.

See that immediately before Christmas, spend the holiday reading the intervening volumes and you'll be well placed to appreciate a brand-new version of *The Voyage of the Dawn Treader* which comes to Sadler's Wells in the middle of January (with a gala performance in the presence of Princess Anne on January 20). Out of London audiences, however, will have to read more quickly: the production visits Haverly, Billingham, Wolverhampton and Exeter in the weeks leading up to Christmas.

A spectacular piece of theatre by all accounts - it is going into Sadler's Wells simply because it needs a bigger stage than the Westminster Theatre can provide - *The Voyage of the Dawn Treader* promises to stick very faithfully to the book. Everything will be there, said a spokeswoman for the production company.

Equally spectacular, if past successes are anything to go by, will be the London Unicorn Theatre's Christmas

freight Holland from *Hi De Hi!*, *Blue Peter's* Simon Groom and the Olympic Swimmer Duncan Goodhew.

Gary Wilmut heads the cast in another *Snow White* at Lewisham Concert Hall, while the Arts Theatre, Cambridge has this year's rarity, Matthew Kelly takes the lead in Robinson Crusoe, with Peter Sowerbutts from ITV's *Super Gran* in the entirely un-Deafcan role of Mrs Crusoe.

So much for the provinces and suburbs. Don't bother thinking about taking a British Rail "Super Saver" to London in the hope of something better, however. There'll still be lights in Regent Street and a tree in Trafalgar Square, but there are no traditional pantomimes at all in the West End this year. Even Peter Pan's gone flyabout (catch it, with Bonnie Langford in the title role, at Southsea, Hull or at the Congress Theatre, Eastbourne over the actual Christmas period).

Worth noting: the National Theatre's new version of *The Pied Piper* opens in the Olivier in mid-November with morning and afternoon performances chiefly intended for six to 12-year-olds. There's also The Patent Office Robbery, a technological melodrama for much the same age group which the Molecule Theatre is bringing to the Mermade Theatre in mid-December and then the Bloomsbury in January.

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Town and country

Nick Baker on farm visits

The pigs at Lightwater Valley Visitor Farm never see the light of day, and during the summer months need to be calmed by music from the local radio station in order to neutralize the noise and movement of their many human guests. On the other hand, they're healthy enough to give birth to an average 1,400 piglets per week. And they don't appear to mind being watched while the piglets are being conceived.

Lightwater Valley is the perfect place to confront the issues and correct the fallacies connected with modern animal farming. "Modern" is the correct term. Lightwater staff wince at the words "intensive" and "battery" but agree that the way pigs, chickens and beef cattle are raised there can hardly be called free range. If those porkers do get hooked on the hit parade and never get a decent mud bath, it's the Great British bacon eater who's to blame. Outdoor pigs develop too much fat for our tastes. The Danes started it all, apparently.

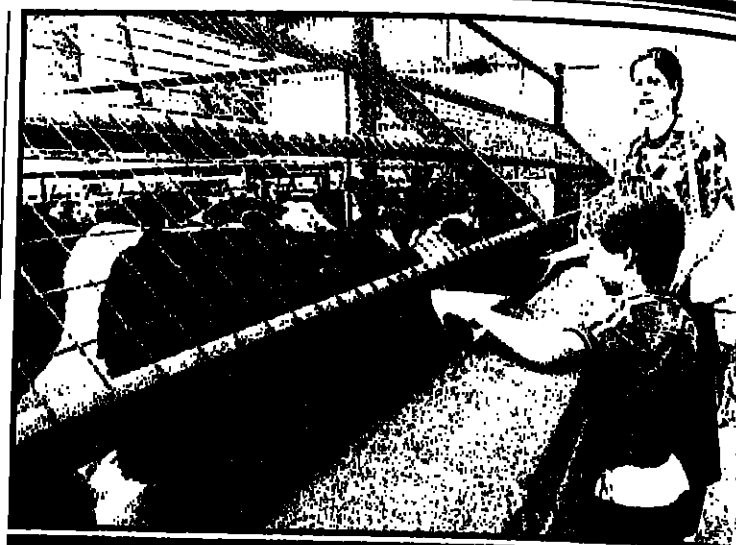
The pigs are somewhat cosseted. Many outdoor-reared piglets are crushed by the huge weight of lazy sows. When a Lightwater sow stands up in her pen, she triggers a cooling under-belly fan. Mum appears to like this, but the piglets hate it and clear the danger zone, pronto.

Young visitors get a full picture of pig farming, can witness matings (mornings only) and see the pre-labour scrub down and the farrowing itself, followed by the suckling of the tiny piglets and the fattening process, stage by stage. All is carefully (if a little jocular) labelled and the pigs are isolated from human germs by glass-lined, carpeted corridors. This means the pigs don't emerge dirty and smelly unless they want to.

Similarly insulated are the 5,500 or so chickens, kept to lay fertile eggs for the poultry trade. They live in a huge dimly lit barn, with room for a bit of walking, and access to lots of egg-laying boxes. Some of the eggs are hatched at Lightwater, for show rather than anything else. According to General Manager David Ward, they wouldn't go out if you opened the door.

Ward stresses that this is a commercial farm, run as all such farms are, to fill dinner plates. Nothing is hidden from public scrutiny, all is clean and well kept, and as such it's a useful introduction to farming for food. Only the 110 head of beef cattle get into the

SCHOOL VISITS



Fairly close encounters at Lightwater Valley Farm

open air, the odd duck and chicken are there largely for cosmetic purposes, and there are spring lambs outside during the appropriate months, for visitors to "sah" over prior to the addition of mint sauce.

Spring is the best time for schools to visit. In the later summer months the people don't enter dirty and smelly unless they want to. Any deep thoughts about killing for food are likely to be eclipsed by the wonky bikes, the miniature railway, the devil's cuscude and the mini motor bikes. The devils also pick your own fruit and a nine hole golf course as well, so there's no shortage of activity. A farm and a fun park may seem incongruous country-ty-fellows, but make a day out mixing pleasure and learning, especially for primary schools. Lightwater offers good value for money. Guided tours, and visits to schools by staff can be arranged prior to a visit to the farm. In complete contrast to Lightwater, nestling noisily between the main line out of St Pancras and the North

London Line, is Kentish Town City Farm. This, it has to be said, is not a real farm in the sense that it's not there primarily to provide food. It's really a community facility. On three acres (compared to Lightwater's 60 plus) of land abandoned by British Rail.

As with all city farms, and there are about 40 in Britain, a prime purpose is to allow city children, particularly young ones, to experience animals and find out a little bit about what food actually is. Kentish Town's Mike Jem told me that a recent visit concerned a group of children from the local play school didn't understand when their teacher told them she made her own soup. They thought soup came from the supermarket. So, it was off to the city farm to see some ingredients on their home territory. As well as the inevitable friendly encounters with pigs, sheep, goats and cows, there's the chance to sit in a field (rare for some London children) and to watch the farm at work. The farm caters for pensioners who have their own patches for flower and vegetable cultivation, and helps all sorts of others including YTS trainees, the mentally handicapped, and the odd youngster who just wants to amble in and get involved.

There's never a shortage of work that needs doing, but the atmosphere is calm and relaxed, if a bit dishevelled. However, you're more likely to meet a pig on its own terms than you are at Lightwater.

Many teachers want to visit "real" rural farms, of course, and there's a gratifying number of farmers willing to throw open their gates (as long as they're closed after, of course). The National Farmers' Union (local phone number should be available in the directory) can arrange the "twinning" of farms and schools. Also available from the NFU is a newsletter called *What's On in the Countryside*.

The Association of Agriculture, Victoria Chambers, 1620 Stratton Ground, London SW1P 2HP, 01-22 6115, and in Scotland Royal Highland Showground, Inverness, Newbridge, Midlothian EH28 8NB, 031-333 3805 runs its own educational advisory service and can act as an intermediary in the arrangement of farm visits for children of nine and over. It is also able to suggest suitable teaching farms and farm centres for younger children. Also available are useful guidelines for school farm visits, as well as the address of your closest city farm.

Lightwater Valley Visitor Farm is at North Stanley, Ripon, North Yorkshire HG4 3HT, open April, May, June, July and September for school visits. Party bookings by arrangement only. Telephone 0765-65521. Kentish Town City Farm is at Crossfield Close, London NW5, 01-42

Treasure trove

Iola Smith finds out about gold mining

Long before pits were sunk in the Rhondda Valley, Roman prospectors had found wealth beneath Welsh hills. Mundane coal was not their goal however. They were after richer pickings - gold - and they found it in West Wales. At Dolaucothi (halfway between Llandovery and Lampeter) they opened the sole Roman gold mine in Britain in AD 75. Almost 2,000 years on, it is still being worked, although the emphasis now is on teaching and research rather than Klondike type prospecting. For the mine is now being leased from the Crown Estates to University College Cardiff for teaching mining geology and engineering to undergraduates and to serve as a field studies site for A level geography and geology pupils.

"The College's involvement in the mine began during the 1970s when the Department of Mineral Exploitation prepared geological surveys of the workings and acted as consultants for a Canadian prospecting company, Anglo Canadian Exploration", says UCC's mining geologist Dr Alwyn Annel. "At this time, the College was using an iron mine in Glamorgan for teaching purposes, but its closure resulted in the department having to look elsewhere. Dolaucothi was deemed ideal, for although it hadn't been mined since 1939 it did offer students an opportunity to reclaim disused workings, drill new tunnels and assess mineral output."

Since 1978 the College has spent 100,000 on the site. In addition to developing the mine itself (which has expensive drilling costs of £38 a meter) self-entering accommodation has been provided for 26 people. And, in association with the National Trust and the Wales Tourist Board, there is a Visitor Information Centre to cater for the 2,000 or so tourists who visit the mine each summer.

Although tourism is becoming an increasingly viable part of the operation with visitor trails, underground guided walks and video demonstrations available, teaching and research continue to be the main activities according to Dr Annel.

"Undergraduates use the mine to bridge classroom theory with practical experience. Engineering skills such as drilling, mine safety and construction are learned in addition to geological survey work and the geochemical analysis of soils and streams to ascertain their mineral content. Students also attempt to detect new ore veins and separate the real gold particles from the surrounding pyrite rock."

Used as an experimental pilot plant sized mine, about 500 tons of rock is worked each day when students are present. The equipment, including expensive diamond drill machinery, however, is similar to that used in commercial mines. In future, there will be additional tunnels to link previously unconnected workings, and it's hoped that (planning permission willing) a small processing plant will be built on site to separate gold particles from the surrounding rock. Break even point

for the mine would be processing four grammes of gold from a ton of rock. But the College believes that yield could be as high as seven or eight.

Productivity should increase next year. Electric tram cars will be used to move waste rock and equipment from a closing lead mine may be brought to Dolaucothi. Eventually, visitors should be able to watch the processing plant in action and have a go at panning gold themselves.

"For the numerous sixth formers who visit the site, an illustrated guide book outlining the mine's history and geology is available. Alwyn Annel explains. Most pupils attend for geography and geology field studies as the site is rich in geographical features. Studies of (for example) glacial effects, the ordovician and silurian rocks and the effects of such geology on the landscape can be undertaken. With the advent of GCSE, we also envisage that more fourth and fifth form groups will visit."

Under theegis of the Mining Industry Manpower and Careers Unit, three weekend courses are run for geology, geography, chemistry and physics A level students, while the Engineering Industry and the National Coal Board both sponsor one-day courses for schools. Sessions include underground tours, talks and practical exercises. Specialist teachers' courses are also held there.

Research work undertaken at the mine includes detailed survey work and attempts to establish the origins of gold deposits in the area. Dolaucothi is over 70 miles away from the nearest gold veins at Dolgellau, Gwynedd. But the College believes that both sites share a common origin, dating back to geological upheavals some 400 million years ago.

The Archaeology Unit of St David's College, Lampeter has unveiled much of the mine's history. Roman artefacts have been recovered and chisel markings of that vintage have been found on tunnel roofs. The archaeologists have also revealed the Romans' sophisticated irrigation system which supplied water daily to the site. It's been calculated that the Romans removed 500,000 tons of rock from Dolaucothi, and extracted about 830 kilograms of gold.

Although mining was continued intermittently from Roman times to this century, the mine did not reach peak production until the year before its closure. In its swansong year, 1938, it employed 200 men to crush almost 17,000 tons of ore and extract 1388 ounces of gold. Then, it was only worth £11,106. At today's prices it would have been worth £327,000.

Teaching rather than profitability is Dolaucothi's objective today - indeed, lease requirements will not allow large scale prospecting. But the mine's great value is that it gives work experience and learning-by-doing opportunities to the students and pupils who visit each year. And, unlike most situations of this kind, Dolaucothi has the bonus of rewarding effort with a literal pot of gold.

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Spider web of railways

The Kent and East Sussex Railway VHS £25 + VAT

Available from Kent Educational Television Centre, Barton Road, Dover, Kent CT16 2ND.

The rush to pick up custom from goods and passengers travelling between London and the Channel ports soon covered the map of South East England with a spider web of railways. In the middle, though, sat the town of Tenterden, isolated in the countryside with main lines several miles away in each direction.

Tenterden's problem was solved by the Light Railways Act of 1896, which made it possible to build cheap rural lines. Colonel Holman Stephens, an engineer with an abiding belief in rural railways, and the ingenuity to make them work and earn money, built what was first known as the Rother Valley Railway linking Robertsbridge, on the main line to the coast, with Tenterden. This opened up the hopfields of the High Weald to the markets which awaited them, and increased the quality of life in the region to an incalculable degree.

This 20-minute video tells the story of the railway from its opening to its present existence as a preserved steam line run by volunteers. It is well written and narrated, and the camera work is proficient. Steam engines in a rural landscape are a gift to the film maker, but the familiar-looking shots are used to some purpose: for example, when the narration speaks of the difficulties posed by the two-mile incline to Tenterden station, we see a tank engine working hard up the same incline with a train.

film of the railway in its heyday, and what looks like home movie shots of early preservation days after the line's closure in the Sixties.

Altogether this is a fine detailed snapshot of a bit of railway history, shedding particular light on the 1896 Act, which clearly had a great effect on many rural communities. It is, of course, given tremendous impact by the continuing existence of the line, and of some of its original engines. If they have not already done so, other working steam lines might well consider how they could follow this excellent example of how to give their work a universal historical appeal.

Gerald Haigh

Gasoline

Petrol VHS or U-matic, free loan
Shell Film Library, Unit 2, Cornwall Works, Cornwall Avenue, London N3.

There is a quite surprising amount to say about this liquid we call petrol and the Americans - more correctly it seems - call gasoline.

Interpreting its subject matter rather narrowly, Petrol confines its attention to the actual processes of oil refinery. We learn how the crude hydrocarbons are divided into six "fractions" which are drawn off and stored separately, only to be blended together again later. Fuel quality affects engine performance, and there are exacting requirements for a good blend. Research goes into things such as the air-to-fuel ratio, engine load and speed, exhaust gas - so far, no mention of environmental considerations. Maximum efficiency is the guiding principle.

The latter part of the film, however, does pay some attention to the environmental issues. We learn about the problems of icing throttle plates, of knocking and hiccupping engines and of how experimentation is in progress, to improve engine performance, not by adding lead to the petrol, but through extra refinement of the gasoline components to produce a high octane, low lead petrol.

Francesca Greenoak

Governor power

'If we don't tell them what we want, how can we expect them to give it to us?'
Stewart Brown on a programme for prospective governors

A Voice In the School VHS or Betamax £15 (ILEA schools); £25 (non-ILEA schools) + 10 per cent p & p

ILEA Learning Resources Branch, Centre for Learning Resources, 275 Kennington Lane, London SE11 5QZ.

The role and responsibilities of school governors form the subject of this resources package, produced by the Inner London Education Authority's Equal Opportunities Sub-Committee. It consists of two short video programmes, with accompanying pamphlets and fact sheets.

The two video programmes argue, powerfully, the need for governors to be drawn from across the full range of social and cultural circumstances that feed into any school and to reflect the values and aspirations of their particular groups. As one Asian governor says in the course of the programme, "If we don't tell them (the educational establishment) what we want, how can we expect them to give it to us?"

The thrust of the video is to encourage potential parent governors from those groups not traditionally involved in the administration of education to stand for election. The understandable

reluctance of many potential governors to be the token ethnic representative is countered by a demonstration of the extent of governor power, if that power is fully and conscientiously exercised. As another of the contributors says, "Equal opportunities means a redistribution of power and a redistribution of resources."

PARENTS GOVERNORS

So we see the governors of one model primary school in action, both collectively - at lively governors' meetings - and individually, involving themselves in the school in various ways, pursuing their own particular interests and causes. We see how the influence of governors actually effects change in school practice in such areas as safety and nutrition, and, most particularly, in sharpening up the schools' awareness of the issues of sexism and racism.

One governor, for example, takes it on herself to make sure that there is the

right mixture of dolls of various shades, features and sexes in play areas, and makes a practical contribution to the stock of multicultural materials by finding, and recording, stories in both ethnic languages and English.

The videos are very skillfully cut to show the real experience of governors and yet to make the point that the Equal Opportunities Committee wanted to get across without seeming to preach at the viewer. Noel Hardy, who produced the prize-winning Afro-Caribbean Educational Resources video, *To School Together*, manages to make the role of a school governor seem both worthwhile and exciting. But while the video touches briefly on the role of the governor as a kind of ambassador for his/her school, it doesn't spell out the political implications of the kind of shake-up in educational administration that the positive adoption of "progressive" attitudes by the majority of governing boards would imply. At a time when schools are being squeezed for resources by a central government which is, as Sir Keith Joseph's parting swipe emphasized, particularly unsympathetic to multicultural education, the confrontation could be explosive.

Girls at work

Short Change VHS or Betamax £25 incl. Dudley TVEI Project, Dudley Teachers' Education and Development Centre, Laburnum Road, Kingswinford, West Midlands DY6 8EH.

Originally commissioned from Playpus Theatre in Education Company, for schools and colleges involved in Initiatives, this hour-long video on the sex-discrimination problems which girls face at work also has a wide range of applications for life and social skills courses or social studies and sociology.

The script by Jan Puge uses a lively, naturalistic scenario, a hairdresser's salon in a small Midlands town, to explore the problems faced by a young trainee hairdresser and her former friend, who has recently been made a foreman in the painting and decorating firm for which she works.

Though sex stereotyping is the dominant theme, the film throws up a number of other important issues, any of which would be a valuable starting point for discussion. In fact, there is almost too much in it for one showing, and it should be used in 10 to 15-minute excerpts in which some of these other issues could be worked on - for example the training and possible exploitation of trainees, relationships between boss and employee, or the grading and status of particular jobs.

A brief introductory booklet and a teachers' pack of approximately 23 work cards, containing suggested class activities and useful statistical and background information, are a useful addition for getting the best out of the film.

Ann Fitzgerald

Hire or buy

Child Education, one of the main libraries for hiring and selling videos, is changing its organization to cater more for the needs of schools.

In the hope of encouraging more schools to buy videos and build up their own libraries, they are offering free five-day previews of programmes. They are also shifting their focus away from medical and social issues to more mainstream education, such as Craft, Design and Technology and language teaching.

Mr Stephen Morgan, the company's manager, says they have talked to teachers in schools and resource centres around the country and two messages came across. First, that schools must see a video before they will buy it, and second, that they cannot afford to pay more than £35.

So, as part of their new push for sales, they have dropped their prices from £50-£60 to £30-£35, and have been offering free previews since September 1.

Sales of videos will not preclude rental. At the beginning of the year there was evidence of a decline in rental by schools, with only the free loan section holding steady. This year, it has picked up again, with what Mr Morgan sees as "a greater acceptance of video in schools."

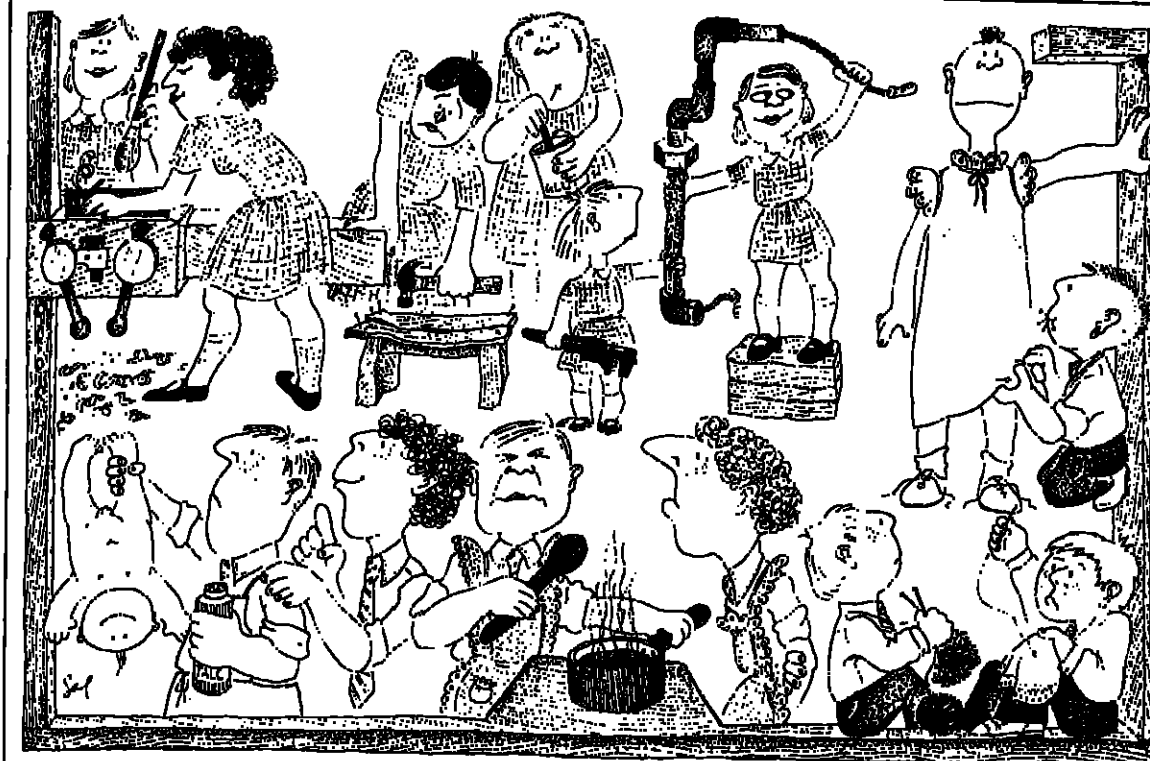
Rental is particularly important, he says, for schools that can't afford £30-£35. And it can provide a way in to the new technology for schools that are hesitant about it. Also topical videos, he suggests, will always be more attractive to rent than to buy.

For both rental and sales, Child are rationalizing their price structures and services in the spring, with a proposed one-off hire price of £10-£15, including postage and packing, and a purchase price of £30-£35. This way they hope to offer a better package to help schools build up their libraries.

The material will look different. The clear need for teaching materials on how to use the videos in the classroom has led to plans to re-edit programmes and provide support materials like guides for teachers. There will also be a move away from the continuous 20-minute programme "to introduce, stop and start, as with a book or projector" and a time clock, any appear on the screen picture to give teachers better control of the video within a lesson.

Gillian Macdonald

EXTRACDT



Roundabouts and swings

Ten years ago the Sex Discrimination Act opened up school workshops to girls. The event caught the imagination of the media. For the first time for a hundred years practical subjects found themselves newsworthy. Not that the media had ever heard of CDT. Nor, for that matter, had the Equal Opportunities Commission. Rather than adopt the official designation, both parties insisted on reporting what they observed, or believed, to be going on - namely, "woodwork" and "metal work". Neither should be judged too harshly. Even within Elizabeth House there was a distinct lack of consensus. Perhaps the residents were not on speaking terms with each other. It would account for one wretched civil servant advising Mrs Shirley Williams, the then Minister of Education, to utter that she would not rest until every girl in the country had the opportunity to do "carpentry". The CDT fraternity should not be complacent. Officially CDT may rule, but a series of vox pop interviews might prove otherwise.

What has happened since those early days? While, in general, researchers are treading on each other's heels as they investigate the ever-smaller minutiae of issues affecting girls' performance in, and attitudes to, curriculum subjects, in CDT those attempting to do so are more likely to suffer feelings of apoplexy. Indeed, apart from a handful of notable exceptions, few have ventured into the field. In the absence of objective criteria, one is, as a consequence, forced to read the tea leaves or rely on seat-of-the-pants hunches to disentangle a confused scene.

How warm was the welcome extended to girls in the years immediately following the 1976 Act? A national survey of some 450 secondary schools in England and Wales in the academic year 1976/77 conducted by the author and his colleague, Margery Smalley, examined CDT teachers' attitudes to teaching girls. It revealed some to be enthusiastic supporters, a few self-confessed misogynists, with the bulk adopting a neutral stance. Yet, at the same time, many in the last category expressed a fear that admitting girls effectively 'cut by a half the time previously available to boys. True, but hardly a position of neutrality. The corresponding benefits to boys, gained from taking subjects up to 16 that time exclusively the preserve of girls, seemed surficial.

While it was possible to detect a strain of deep conservatism, or even

JOHN PENFOLD

prejudice, against teaching girls CDT, not all shared this view. Groups of teachers from London and the south-east, committed to the idea of promoting CDT to their pupils at Shoreditch College in 1978. Questioned about their attitudes to "craft", many girls expressed "feelings of satisfaction and achievement from making things" and enjoyment from "doing practical work and using their hands". When asked to state what they least enjoyed about their new subject, responses recording "too much theory and writing", and "not enough practical work" topped the list. Food for thought. These findings, from girls living in the south-east, were echoed by their opposite numbers in the same age group who attended a conference organized by the EOC (Equal Opportunities Com-



Working in a Design and Technology project.

Technological studies in Scotland
Knowledge on demand: a design project
No halt to the brain drain
The challenge of cybernetics
Lincolnshire's approach to CDT
The Wirksworth Boat Show
CDT in the colleges
Challenge and response: conflicting aims
Materials testing on a shoestring

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preparation for examinations that the majority will never take or for jobs they will never pursue. It was not to be. 1976 also happened to be the year of James Callaghan's Ruskin College speech. It launched the CDT bandwagon into a different orbit, thereby leaving many girls in the lurch.

Could more have been achieved in this first decade of equal opportunity? Some I.e.s.s. were undoubtedly tardy in their response to the 1976 legislation. Eight years after the Act some schools within a 50-mile radius of Elizabeth House were only just beginning to comply with the law. If isolated schools are still acting illegally, the EOC should stop pussyfooting about and prosecute. The time for persuasion is past. However, today it is less a case of complying with the law and more a matter of adopting its spirit.

What are the obstacles standing in the way of further progress? Without doubt the overwhelming male image of CDT still presents to the majority of young girls entering workshop complexes for the first time poses the foremost challenge. Admittedly, helpful constructive suggestions are now at hand. Nevertheless, apart from the ILEA and a small number of other I.e.s.s. who have noteworthy track records of employing female CDT teachers, most girls will not see, let alone be taught, CDT by a woman.

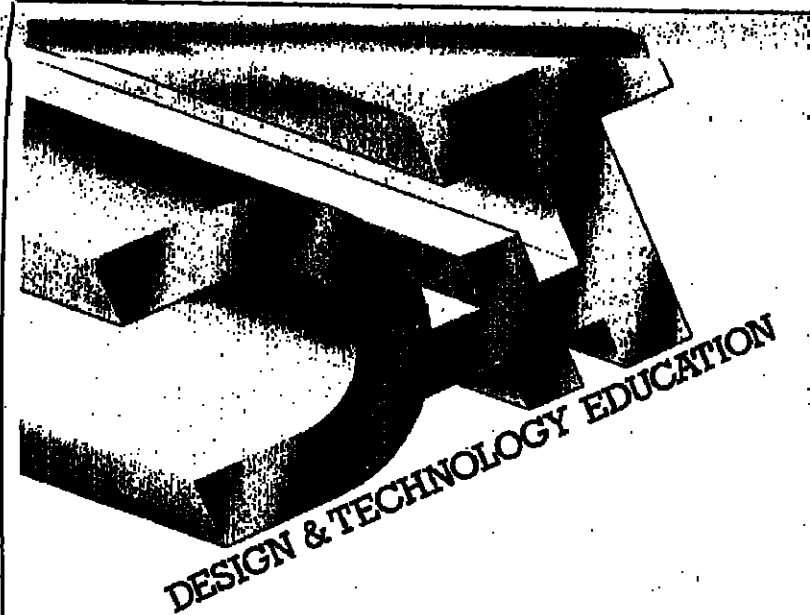
The number of women in training may be lamented but it does no more than reflect a catastrophic situation overall. Conversion courses are frequently highlighted favourably because of the greater number of women on them. Despite this, women are advised to

regard this route into CDT teaching with suspicion. It provides fodder and congestion at the bottom rung of the ladder with little prospect of further promotion. Only a blind optimist would conjecture that conversion courses will lead many women to become heads of department, let alone I.e.s.s. advisers, teacher trainers or HMIs.

The lack of female role models is compounded by peer group pressures which inhibit more girls from continuing with CDT to examination level. Combine these with lack of male encouragement and all but the most determined girls are deterred from proceeding further. At CSE and O level the situation is bad enough. At A level girls have all but disappeared. In 1985 there were 41 entries for the Design and Technology examination. By comparison, 14 entered for building studies and 22 for surveying.

Potently, there is an enormous task ahead. This is to leave to one side the business of extending CDT teaching into girls' schools - a battle hardly begun. Yet the future of CDT is inextricably linked with it being an acceptable and attractive subject for intelligent and articulate girls. It must never be forgotten that girls make up half the school population. Without them CDT will continue, despite the enormous strides of late, to be a peripheral subject, sensitive to political pressures and lacking in the necessary status and rigour to indicate that it has come of age as a curriculum subject for all.

John Penfold is a lecturer in design and technology at Brunel University.



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edits

FLYING START

"Flying Start" is the title of a new series of videos and books to help parents teach their three to six-year-olds how to read.

The kits are designed by teachers, and each one consists of a video, a reading book, parents' guide, workbook and flashcards. The programme is presented by Rolf Harris and combines live action and cartoons with drawing and singing.

The aim is to encourage children to watch the video "over and over again" in the hope that they will absorb the words and simple sentences that appear on the television. The reading book and ancillary materials are intended to reinforce any learning from the screen.

Kits 1 and 2 are available from major high street stores at £19.95 each. Kits 3 and 4 will be available early next year.

TOURISM

A new video on tourism has been produced, aimed at young people in school or on Youth Training Schemes.

prescriptive and formulaic, like drawing a figure with "a blob, then space, then body, legs and arms" or painting a tree by following "the direction in which things go or grow".

Crawshaw probably does not intend to have this effect, for later in the programme he asserts that "nature is there and we must copy nature", but his own pictures are too predictably stylized and slickly executed to convince the viewer. Nevertheless, if teachers can overcome these limitations, they need not fear letting their pupils look and learn.

Michael Clarke

"Working in Tourism" highlights job opportunities in the industry and tries to encourage viewers to consider the skills and attitudes required for employment in the various sectors of tourism. The 20-minute programme features locations from an airline and a hotel to a museum and a holiday centre. Staff describe their jobs and outline training and future prospects.

"Working in Tourism" is available on VHS only, price £20, from Dept D, English Tourist Board, 4 Bromley Road, London, SW4 0BJ.

Technology studies in Scotland

All systems go

A new technology course in Scotland is scheduled to be introduced into the curriculum nationally for the first time in 1988/89. Technological Studies is one of a number of new Standard Grade courses designed to make the curriculum more relevant to the needs of young people in their third and fourth years of secondary education.

A joint working party made up of personnel drawn mainly from the fields of technical education and science, has been preparing course guidelines after consultation with various industrial and educational bodies.

A two-year pilot study of the new course is currently underway in 16 trial schools throughout Scotland and early feedback from both staff and pupils is most encouraging. Boys and girls from across the full ability range are participating in the scheme, while teachers of technical education and physics are co-operating in many areas to encourage inter-departmental liaison.

Throughout the course the emphasis is on practical problem-solving using the "systems approach" which is now so commonly found in many areas of British industry. The course aims to:

- Create an awareness of technology;
- Encourage the acquisition of a range of skills in assembly, communication, design and evaluation;
- Allow pupils to comprehend the evolutionary nature of technology and to recognise its effect on quality of life and the environment;
- Highlight the role of technology in manufacturing.

The course is constructed as follows: introductory unit (40 hours); main unit

ALASDAIR URQUHART

(90 hours); major project (30 hours).

The introductory unit is designed as a "taster unit" to provide an introduction to the discrete areas of Electronics, Mechanisms, Pneumatics, and Technology in Manufacture, but as the course progresses the realistic integration of these areas becomes more apparent. In addition, relevant aspects of Energy, Structures and Product Analysis permeate the entire course and are introduced where appropriate.

The main unit continues the theme of the introductory unit with integration to a greater depth and width.

A major project allows pupils to innovate on a basis of techniques and understanding gained in earlier work.

By adopting the systems approach to problem-solving pupils can readily assemble working models through the use of "black boxes", without a need for detailed knowledge of components and internal workings. Indeed, this is the very essence of the course, that an analytical approach to complex devices is not required in order to use that device. A knowledge of the function (inputs/outputs) of the device is all that is necessary in order to use it to solve a technological problem. This is particularly true in the field of electronics which in the past was often approached from a component viewpoint.

Technology in manufacture is in many ways the most exciting and challenging part of the course where pupils tackle problems associated with robotic control and automated handling systems as well as being introduced to CAD and CAM.

The assessment of such a practical,

process-based course has caused considerable discussion. Assessment will be based on Grade Related Criteria for the three elements of Knowledge and Understanding, Communication and Problem-solving. In order to reinforce the importance of problem-solving to Technological Studies this element will be weighted by an order of 3:1:1. Pupils will receive a profile outlining their grade on a six-point scale for each element plus a final aggregated grade for Technological Studies.

A system of internal and external assessment techniques will be utilized in order to reach a final grade. This will place increased responsibility on the teacher to apply the specific criteria to

the pupils' problem-solving skills.

A research project by staff at Stirling University into the "Assessment of Practical Problem-solving in Microelectronics" is being carried out with a cross-section of pilot schools. When complete this should provide interesting results which hopefully can be used to aid the assessment workload.

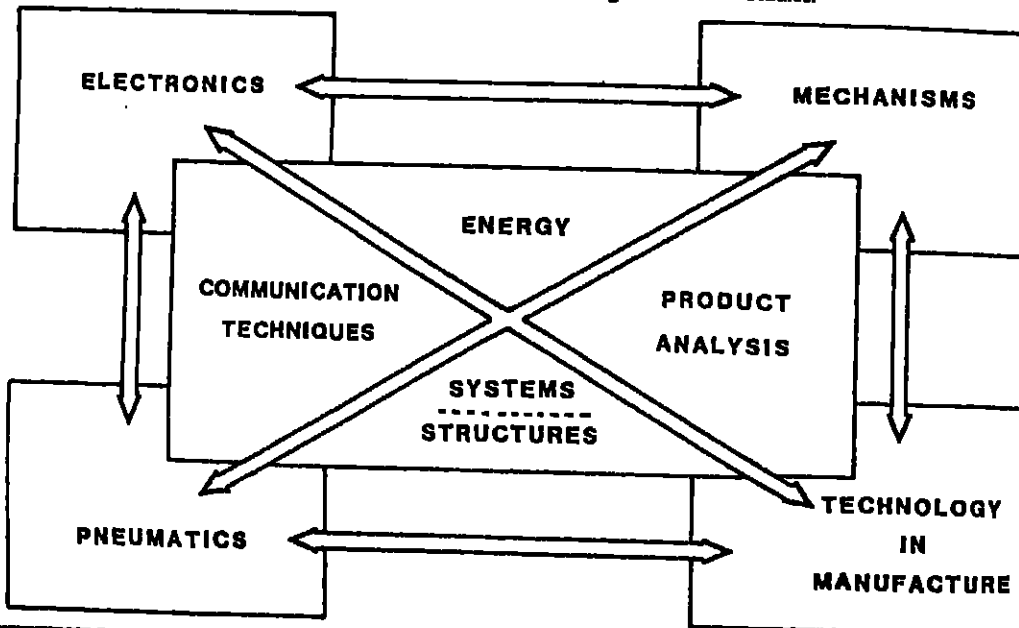
The question of resources has caused considerable investigation into identifying suitable equipment to meet the aims and objectives of the course. The evolutionary nature of any technology course must make this an on-going process of discussion between curriculum developers and the equipment manufacturers. Technological Studies is not a cheap course to resource, but if it is to be effectively introduced into schools it must be supported by well designed and reliable equipment. The "pin and string" approach will not suffice.

In order to promote a general awareness about Technological Stu-

dies two short videos have been produced. "Technological Studies in the Curriculum" is designed for headteachers, careers masters, parents and industrialists. "Technological Studies in the Classroom" is mainly for teachers considering starting the new course in their departments. Details of both these videos can be obtained from the Scottish Curriculum Development Service, Dundee College of Education, Gardyne Road, Dundee.

The inclusion of Technological Studies in the school curriculum should help to develop a better understanding of technology as it is applied to industry and commerce. It should also help to develop an awareness of the applications of technology in the community and in recognition of the responsibility to humanity and the environment that technology imposes.

Alasdair Urquhart is the National Development Officer in Scotland for Technological Studies.



Design dimension project



Pupils at Darrick Wood School working on a mechanisms project

Knowledge on demand

OWEN SURRIDGE

Saws rasped unceasingly in the woodwork room. Benches were lined up, factory fashion. At each were boys pushing and pulling, their faces intent with concentration and anxiety. Their task was to cut slices of timber 1/4" thick, neither more nor less. Production of the perfect slice was the pass to more constructive learning. Some of them never made it.

The experience was not lost on Alan Barker, then one of their number, now headmaster of Darrick Wood School in the London Borough of Bromley. "I hated it," he told me with quiet emphasis, "hated it." The contrast between that way of doing things and what happens now in his own school could hardly be greater.

He believes firmly that good teaching should bring out the individual ability in children. So, when approached by the organizers of the new Design Dimension Project, which is intended to demonstrate that children have innate ability for design, he jumped at the chance to participate. This is one of 15 secondary schools, drawn from the London Boroughs of Bromley and Sutton, Gloucestershire and Cleveland, co-operating in a seven-year experiment intended to introduce a design dimension to the teaching of all subjects. The aim is to develop young people's awareness of design and understanding of the man-made environment, its products and images.

For teachers participating in the project the effect is that of an on-the-job re-training course to switch them from the rigid track of didacticism into the more open, but more difficult, path of consultancy: provoking youngsters into involvement in practical problems to which they must find their own answers rather than demanding "right" or "wrong" replies to abstract questions. The skill lies in planning work so that youngsters encounter the theories *en route* to solutions.

The underlying purpose is to develop, rather than inhibit, children's imagination and inventiveness; and to demonstrate, also, that school is concerned with the outside world, not empty academism. This sounds idealistic, but the pro-

ject is firmly anchored in the bedrock of practicality: its training workshops, conducted from a colourful roving bus, are strictly about converting theory into practice. At its launch Roger Standen, director of the enterprise, said firmly: "This is not a theoretical exercise. Teachers are expected to produce work."

Since the idea is to demonstrate the inter-relatedness of knowledge it is not surprising to learn that an early aim was to winkle teachers out of their isolation and to get them to co-operate by making their specialist knowledge available for solving particular problems.

Although the aim is that the project should be applied across the curriculum its most convenient starting point is the craft, design and technology department where cross-fertilization of ideas is of great importance. Just how it can work I saw for myself at Darrick Wood School, where I talked to teachers in the design faculty. There the old labels "art", "woodwork" and "CDT" appear as an administrative convenience on a departmental list, but in practice have lost much of their individual identity. Bruce Nuttall, head of the faculty, whose training was in fine art, explained: "We are all design teachers now. We all know I am art," etc, but the change breaks down barriers in children's minds." Proof of this was apparent in decorative finishes applied to wood where the influence of the art element was obvious.

The nature of the change was spelt out by Malcolm Lake, who once ran a traditional woodwork room and whose own early fears about the possible loss of craftsmanship were overcome when it was brought home to him that although traditional ways of doing things might change, fitness for purpose and quality of work would continue to be vital.

"The old craft teacher put pupils in front of a drawing of a tea-pot stand and they made it, whether they wanted to or not," he said. "Now we start from the design end by posing the question of how to prevent damage when a hot pot is put on a table." The youngsters

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Funny faces

NICK BAKER

It's just as well that the pupils studying home economics at Nicholas School in Basildon, Essex, enjoy a challenge. Last year the head of the CDT faculty (which embraces home economics) came up with a design brief for second-year pupils that might have had the professionals scratching their heads. The task was to create inflatable toys suitable for handicapped children to use. The work was to be divided between two areas of the timetable. In their CDT classes the pupils were to come up with ideas for design, using a problem-solving approach, in their textile class, under the guidance of home economics teacher Helen Wood, they were to make the toys themselves.

Design work, looking at pumps and valves as well as the problems of how to make the inflatables tough enough way when the bad news came. The straight materials necessary were out of the range of the budget. The local Abbey National staff, continued to raise cash while the Nicholas pupils more or less literally went back to the drawing board.

There were two possible solutions. One was to build considerably fewer inflatable toys. The other was to make many toys as was previously planned, but find a less expensive material. The second choice was democratically arrived at by the pupils, and while some design ideas were salvageable, others had to be abandoned.

The teachers' action was another problem to steer around, as was the lack of a suitable parent who could be quizzed about a handicapped child's needs and tastes. Instead, the pupils took their questions to the school's child care staff who suggested the right people to look at to find out more about physical and mental disability.

In the end, a willing clientele was found for the toys. Staff at Elmbrook School, attended by about 80 children, with severe learning difficulties, were enthusiastic about the designs, and at a

special tea party again courtesy of the home economics department, the toys - perhaps a better description might be "fun furniture" - were handed over to the Elmbrook children, who took to them immediately.

In the furniture department, the Nicholas children had come up with two jolly cushion seats with faces and fat adjustable legs for extra support, both with loose covers for easy washing. There was also a pretend rubber dinghy with detachable cushions. By means of simple ties (or buckles or zips in evidence, for safety reasons) this could be transformed into a comfortable low slung arm chair.

In the toy department, there were some attractively covered soft bricks, extra stuffed for increased resilience, as well as a circular cushion on which funny faces could be made by means of velcro attached eyes, noses and mouths. There was also a special punchbag with its own restraining strap to prevent it retreating by swinging back and hitting the puncher. Despite its ferocious face, one little girl from Elmbrook hugged it lovingly.

Also on display at the tea party were the special costumes made for the Elmbrook School pupils by Nicholas School third-years, and designed with the wheelchair bound cast in mind.

Needless to say, the contact between children of both schools is mutually beneficial. Despite initial qualms from some of the Nicholas pupils ("At first I didn't know what to say to them," there was obvious pride that their work was such a success. Textiles teacher Helen Wood also found the sewing element perfectly acceptable to boys who sometimes can react against needle and thread at that age. As for John Hobbiey, head of Elmbrook School, he confessed to being "staggered" by the thought that had gone into the toys. "These things have a genuine educational use," he said. "Some of them are definitely quotable."

EXTRA

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No halt to the brain-drain

RAY TOLLEY

It is possible that the time will soon come when teachers of CDT will kick over the traces and say enough is enough!

Craftsmen are historically down to earth pragmatic characters, well used to recognizing and dealing with error or imperfection. Perhaps a long apprenticeship has taught one to recognize that true perfection is almost impossible to attain even when using the best of home-grown materials. When those materials are human, with all the potential variations that even Mendel could not compute, when those souls are nurtured in an accelerated, hot-house atmosphere, with little stability of a good root-structure, it is no wonder that our chaplings exultate or hear little or no fruit.

I believe that teachers of CDT have reached a crisis point beyond which there is no clear future. There is no security of tenure, no security of job satisfaction, no return on added investment. As one who has been concerned for INSET for over a quarter of a century, certainly before the acronym was formulated, I will attempt to illustrate the problem which is all too familiar to many.

In the early 1960s the local branches of our Institute regularly put on self-help courses and national meetings for teachers and other interested parties. Saturday mornings often found groups of enthusiastic teachers learning the latest tricks in anodising, laminating, radio-control, etc. *ad infinitum*. Holidays often found colleagues meeting together for residential courses invariably paid for out of their own pockets.

Slowly, local authorities began to recognize their responsibilities in terms of training and a few courses began to be provided in areas such as oxy-acetylene welding or wood-machining, although organizations such as our own still provided a vast amount of training in many topics. By the mid 1970s prohibitive regulations, quite rightly in some cases, began to be enforced in areas of safety or "good

better technologists. The training colleges and universities appear to have had little "clout" in this area either.

If we revert to our title the crisis will become more apparent. Almost four years ago the Prime Minister announced the advent of TVEI. Little did we realize just how enervating this would be to the remaining schools. Teachers of CDT have been creamed off, and continue to be, from the normal school system. The contractual requirements of replication appear to be slow in occurring, little real feedback has happened and for many outside the initiative jealousy and introspection would appear to be the main by-product.

It would seem that many probationary teachers, fresh from college, are not adequately equipped to take up the demands placed upon them: an increasing number quickly leave the profession for other jobs. Ventures such as GCSE, CPVE, ITechs, YTS, etc. have certainly diverted some CDT teachers. Yet other teachers have left the profession to find better job-satisfaction, better career structures, recognition of professional integrity and appropriate remuneration.

Most teachers of CDT have a higher number of subsidiary, and often compulsory, qualifications than their colleagues in other subjects; from my experience they certainly attend many more courses and conferences. Despite all this no extra remuneration is considered appropriate nor is any allowance made for the subject in terms of extra "free" periods.

All of the above sacrifices would be

worthwhile if it were possible to hope for "a bright tomorrow". But the stark reality is "No way!" Within the next year I anticipate hundreds of competent and experienced teachers of CDT will leave the main body of our profession; some because they have not been trained how to adjust to the modern approaches as typified by the GCSE etc., some by early retirement, and others by the specific needs of the increasing industrial training initiatives.

The remaining teachers will generally be even more overworked than at present; some will flee to the haven of primary education. To remove yet more experienced teachers to "train the trainers" will only exacerbate the situation. The rest will invariably find themselves relatively leaderless and increasingly insecure. Fragmented "taster courses" and "circuses" will return as insufficient staff are found to fill the timetable; overwork and lack of resources will lead to unattractive workshops; "non-viability" will return and yet further disaffection will accelerate the downwards spiral.

As if that were not enough the latest proclamation is that we can expect to see the emergence of some 20 "Super-Techs" which will certainly drain off yet another layer of the cream of our profession. It will certainly cream off many of our most able students and provoke yet further disaffection amongst CDT staff in our neo-Sec-Mods.

It is within the context of this brain-drain that EIDCT attempts to provide practical and academic help and encouragement, training and pastoral care for all teachers of CDT.

Ray Tolley is vice president of EIDCT (The Educational Institute of Design, Craft and Technology). The above is a personal view and does not necessarily reflect the views of EIDCT.



Knowledge on demand continued

choose what to make; the designs come from them, not from a book.

Echoing the philosophy of the project, he said: "Design is all of us. It shows, even in choice of colour of a pair of socks." Now pupils offer their own ideas about how to tackle a job and decide, in consultation with the appropriate teacher, the skills they must learn to complete it satisfactorily. This enables teaching groups of pupils, all of whom may be at different stages in the production of diverse projects.

The result is a teaching style which bears a marked resemblance to the best primary school practice, with workshops divided into areas for specific needs, whether for discussion or demonstration, benchwork or drawing, and with pupils moving freely from one place to another.

At this point difficulties for specialists as well as children. Problems must be tackled at the right level and limited to the areas of progression while still allowing freedom of choice.

"It needs careful planning and monitoring," said Malcolm Lake. It also means pupils' progress is being constantly assessed and the profile style of report is a natural consequence. The gap between teacher and taught remains, however. "The biggest problem for children," said Malcolm Lake, "is to communicate their thinking to me."

Ultimately the youngsters' range of skills may include an ability to make a mortise and tenon joint, or it may not, but if the teaching is successful they should have the flexibility of mind to cope with what they want to accomplish and acquire necessary skills in the process.

Despite the continual challenge posed by this fundamental change of working none of the teachers I spoke to wanted to return to their old ways. "We were remarkably isolated," before, said Bruce Nuttall. "Now we are a team laying foundations for designing in a way which concerns society."

He admitted, though, that the change had not been easy. "I was initially disatisfied with the work I saw coming through. I was not getting the quality I had been able to organize in the past. It is much harder working

from pupil-conceived ideas, with the children doing different projects and me running around like a technician a lot of the time."

"Now I am becoming heartened. I am beginning to see quality coming through again. Now they have the confidence and the skill to express themselves, not some abstract notion of what is 'right'. This time it is their work. It was a painful transition."

How far the ideal can be translated into reality remains to be seen. The proof lies beyond school. If the pupils grow into more inventively adventurous adults that would seem proof enough. At the moment it is too early to say.

As I left I asked Bruce Nuttall if the children were painting more at home for their own satisfaction. The reference to painting sprang from our conversation at the time but that question could be applied with equal relevance to any of the other skills.

The Design Dimension Project sounds good. Even, at this early stage, looks good but the proof of its success must lie in the answer to that question. If they have got it right it ought to be in the affirmative.

EXTRA

Applied information sciences for the future studied today

The challenge of cybernetics

PETER FELLGETT

Cybernetics is the study of information and its use. As such, it lies at the heart of information-based high technology as well as being fundamental to modern society. The modern subject may be dated from the book *Cybernetics* published by Norbert Wiener in 1948, in which he defined it as being concerned with control, communication, information and feedback, in man, machine and animal.

There can be no control without communication; what is communicated is information, and information is of no use unless it alters the actions of something or someone, in other words, control. So in linking "control and communication" Wiener was not distinguishing them but emphasizing that they are aspects of a single whole. In adding "man, machine and animal" he was emphasizing that the underlying principles of cybernetics are the same no matter what the application, and he gave as his objective the unification of the interactive systems which are ubiquitous both in technology and in the natural world.

The systems involved may be simple electrical systems such as the control of the temperature in a room, highly technical systems used in the automatic landing of aircraft or the control of a production line in a factory (including those areas fashionably called robotics, information technology and artificial intelligence), systems involving the human body as in temperature control or balance, or more general systems such as the world economic system or the planetary environment.

In order to control a quantity, such as the temperature of a room, one must first measure it. Cybernetics thus includes the principles of measurement, signal, noise and detection theory. The measurement produces information, which may need to be processed or transmitted to a distant place, involving information theory, communication theory and the study of computers and computation. The control of the system requires feedback of information so that its actual state is compared with the desired state and appropriate action taken, for example increasing or decreasing the heating in a room. A key part of cybernetics is thus feedback and control theory, concerned with the design and stabilization of closed-loop systems of all kinds.

Another key aspect is Information. The publication by Claude Shannon of *A Mathematical Theory of Information*, also in 1948, was the culmination of the transformation of our concept of information from it being a vague abstract entity into becoming a precise scientific and engineering quantity which can be measured and used in design calculations.

Topics covered in a cybernetics course might include feedback control, theory and practice; measurement and instrument physics; information theory, telecommunications, signal, noise and modulation theory; computer hardware and not just programming; electronics, both as a practical means of doing these things and as an abstract application of cybernetics to a wide variety of topics including, for example,

ple, transport, biological systems, and the planetary environment.

The special challenge and fascination of cybernetics is that it is a broad and integrated subject, bringing together a wide range of interests and topics which are otherwise often seen separately. Because of its wide coverage, individual topics may be studied in more narrowly based courses, but also in a more fundamental way because the inter-relationship between them is brought out. For example, a cybernetist would not seek to develop the specialized professional skills taught in computer science, but he would understand how a computer works internally, how to design its electronics, how to interface it to other equipment, etc., and he would also understand computer applications.

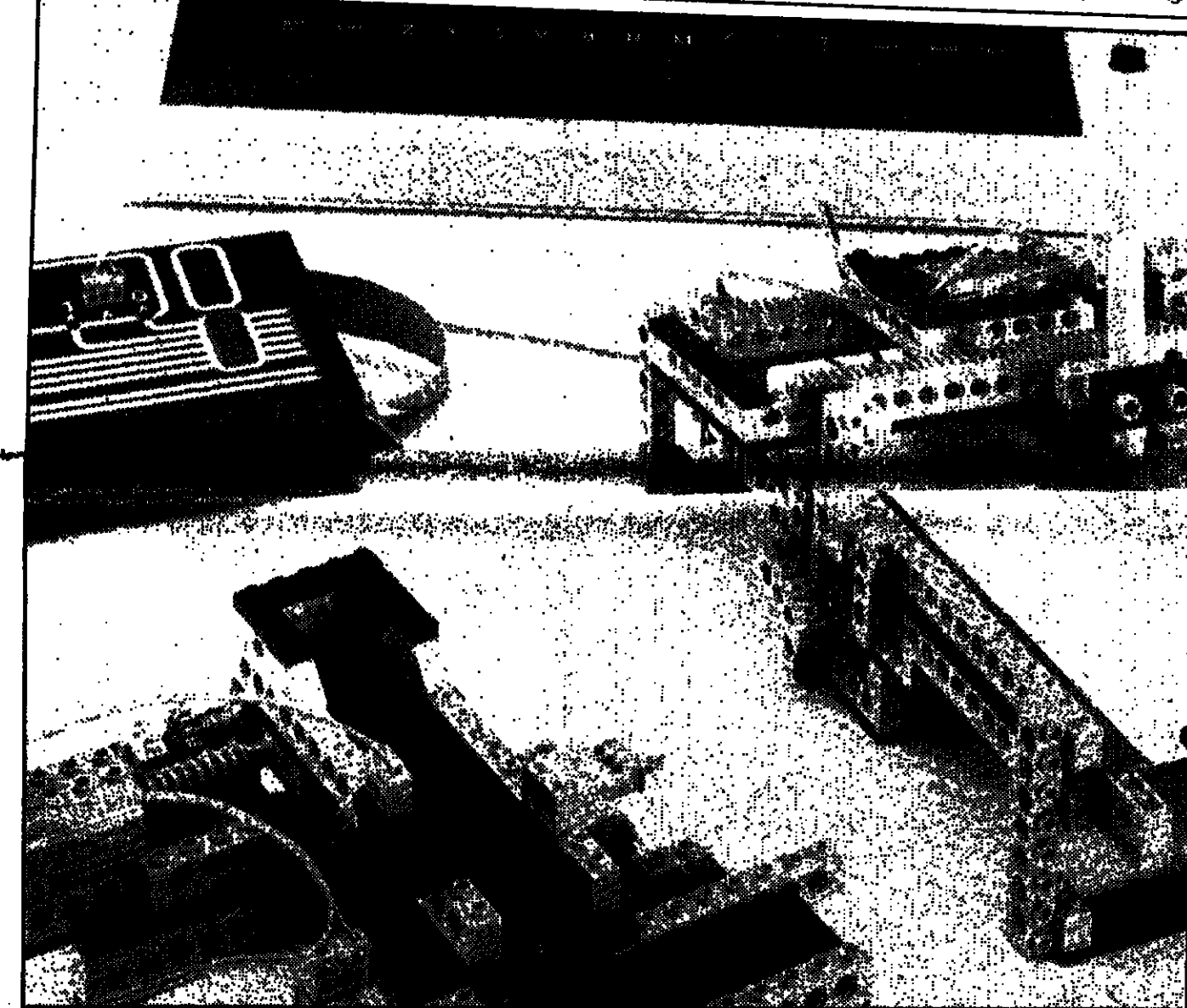
Paradoxically, this more general understanding often enables cybernetists to become very skilled programmers when the need arises. It also saves them from the trap of becoming the slave of the computer keyboard. It may be very exciting to learn how to make a computer sit up and beg, indeed it can for a time become almost addictive, but in the end people ask whether there is not more in life than writing software for other people to use. Cybernetics graduates have sometimes been surprised to find that even while employed in comparatively junior positions, they seem able to explain more specialized members of the team to each other.

Variety and preservation of choice are indeed characteristic of the career prospects of a cybernetist. The subject inculcates skills which are valued by employers without being at hazard to the fortunes of any particular industry. Opportunities include automation and automated industry; computer design, manufacture and applications; communications and telecommunications; general research laboratories; and modern high-technology industry based on information and computers. Culturally also, cybernetics provides essential insights into the modern world in which interaction plays so prominent a part.

Although cybernetics is a well established modern discipline, not being a school subject its vocational and cultural advantages may not be as well known as otherwise they might be to

school-leavers selecting a university course. Not everyone understands cybernetics to be a precise academic and practical discipline. Sixth-formers may feel that to take a new subject at university is almost like starting all over again, and they and their teachers may feel that the hard work done at school will be wasted. In fact, of course, a non-school subject taken at university builds on the fundamental knowledge and techniques acquired at A level (a physical and a mathematical subject are normally required for cybernetics) and there can be special satisfaction when everyone is studying a fresh subject from the beginning. Non-school subjects can be among the most interesting and rewarding.

Peter Fellgett is Professor of Cybernetics at the University of Reading.



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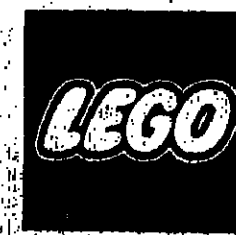
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COMMOTION

Lincolnshire's approach to CDT

Five key factors

ANDREW BRECKON

The development of CDT during the last decade has been meteoric and there has been much complimentary writing about its philosophy, but little about its delivery. This article seeks to show how Lincolnshire has tackled curriculum changes in CDT and to explain its method of delivery over the last five years. Lincolnshire does not claim to be unique, exemplary or to have completed the task; it merely wishes to explain its central strategy and how this has been implemented.

The central strategy has been to develop corporate planning and management of the delivery of CDT. The corporate management has evolved round a partnership between the county's teachers and myself, with generous support from senior officers and county councillors. The planning has been based on five key factors:

1. CDT for all pupils;
2. Common philosophy;
3. Detailed guidance for teachers;
4. INSET as a means of giving skills and confidence to manage change;
5. Good communication.

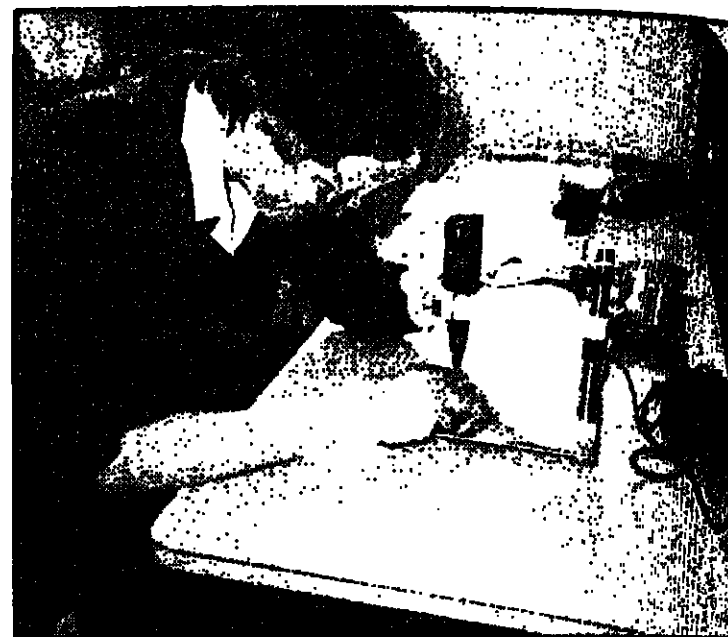
It would have been impossible to realize these factors without clear planning, excellent co-operation and hard work from our teachers.

The first major decision was to establish a common philosophy for CDT within the county. This debate was begun in 1981 and established CDT as a designing, making and evaluating activity, utilizing skills and knowledge in solving practical problems (see figure below). Once this had been agreed, the teachers began work on the creation of a foundation

1-3), which at that time lacked a coherent course structure.

It was a rich experience as teachers assessed current practices and evolved new material and techniques for CDT. Five regional curriculum development groups were established, each with specific tasks for the production of curriculum material, which I co-ordinated into a final document of 140 pages. It included guidance on methodology, knowledge of concepts, assessment procedures, timetabling and a full set of pupil data sheets which were copyright free within Lincolnshire.

Throughout, teachers stressed the need for practical help in the classroom rather than philosophical statements. In areas such as electronics where teachers sought greater guidance, a stage-by-stage teaching approach was adopted. Market research was conducted among pupils to assess the viability and interest of certain projects before their inclusion in the



A fourth-year girl at Boston High School for Girls drilling a PCB for an electronic circuit.

scheme. These detailed guidelines now meant the direction of INSET could be determined.

Resources were made available to enable the course to be introduced into schools were given access to electronics, mechanisms, structures and plastics equipment. The course laid down concepts to be covered but gave teachers freedom to implement it in their own way. This booklet has now been re-written and is published as a pupil-textbook and teachers guide by Collins Educational.

Reactions among teachers and pupils to the course have been very positive. The aim was to use a syllabus which would be well accepted by High Education and allow both aesthetic and technologically oriented students to develop their talents within one course. A peripatetic teacher's assistant schools in this, and a three-day residential course for lower sixth students is run annually.

While this restructuring was taking place at secondary level, primary teachers were involved in some excellent work in problem-solving and control technology. This work was spearheaded by many enthusiastic staff, well supported by DST/MEP. Much of this work is now reflected in the county's primary guidelines for CDT. In support of this initiative, a primary tool kit has been developed and with the assistance of the newly established ESO for Science and Technology, an extensive INSET programme is under way.

One of the authority's key strategies has been the provision of CDT for all. However, there had been a total lack of courses in the county's seven girls' schools. Thus in September 1985 a peripatetic teacher was appointed to work in these schools. A range of different courses was established, mainly for third-year girls, based on designing and making with a technological bias. The facilities initially ranged from science laboratories to an outdoor mobile vehicle. The authority is now creating CDT/Technology rooms in these schools, with priority given to those starting GCSE courses. After only one year there are four sets of GCSE Technology with Spalding Girls High School (a selective grammar school) having two sets. The teaching of these courses is seen between existing staff and the peripatetic teacher, who is also responsible for their professional development in CDT. This initiative is still in its infancy, but the response from pupils, staff and parents is encouraging.

Communication has been an important aspect of the development. A termly newsletter is distributed to all schools and an information leaflet has been produced for parents and the general public. The county has also held a three-month display of work at the Lincolnshire Life Museum as well as major exhibitions at the Lincolnshire and East of England Shows.

A M Breckon is Education Inspector CDT, Lincolnshire County Council.

EXTRA

The Wirksworth Boat Show

Butting up the Channel

JOHN FREEMAN

To the children of Wirksworth Junior School: a "Science and Technology Task". Design and build a floating craft. You will receive four pieces of paper (three for your trials and one for your final model). You may fold it, cut it, shape it, paint it, colour it, glue it, do what you can to it, but make it into a craft that will carry weight and still float. You may get other people to help you. All entries will receive a certificate of merit. Your craft will be displayed and you will be able to tell the people who come to examine it how you built it. Your parents may come to see everyone's efforts too. Your craft will be tested on the first afternoon of the exhibition for floatation and its ability to carry a cargo. You have two weeks to finish the task, so start now. All the best!

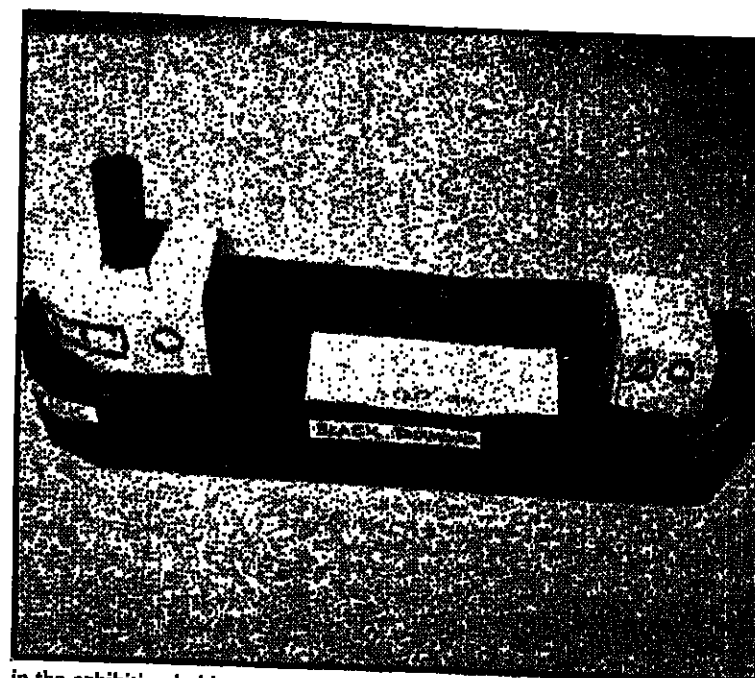
Armed with these deliberately vague details and their paper, the children began. Within a week interest was growing and by the end of the fortnight 75 per cent of the school pupils had taken part (around 150 children). The results were outstanding: so many craft were constructed alongside the manmade lakes in readiness for the exhibition. A team of expert dockers, parents and governors, tested the craft for floatation and cargo-carrying abilities using deep ponds, silver sand, weights and scales and a careful hand.

The techniques used to construct the "boats" included paper folding, making reinforcement struts and strengthening tubes, jointing, waterproofing, gluing and the need for accuracy in copying symmetrical designs. Craft were painted, waxed, varnished, boot-polished, polythene lined and one or two had tin foil and polystyrene trays attached for waterproofing and floatation.

Most children soon learnt that a broad base or deep draft created sufficient water displacement to enable their craft to carry a fair amount of cargo. Paper, not waterproofed, soon absorbed water and sinks; air pockets and floatation tubes are strong and light; floating craft are unstable, so an evenly spread load is vital.

There were lily pads, battleships, a coracle, a submersible created from tubes, deep draft yachts, some with triangular, others with rectangular hulls, reinforced broad based craft, a lovingly constructed dinghy and a "see-through" tourist boat. One design even included a double skin, the air from flightweight packaging.

The "heaviest" of the greatest weight the paper could carry, it made into a hollow sphere, was 2kg. Over 20 craft



in the exhibition held a cargo of more than 1kg, three topping the scales at 1.3kg. Fine achievements.

The main aims - to give the children and their families and friends a scientific and technical task that they could enjoy together and to give the children the opportunity to exhibit their work and discuss their own ideas with a wider audience than usual - were achieved. Added bonuses were the variety of ideas and the interest and excitement shown by parents and older brothers and sisters.

Typical quotes were: "Deep boats push more water out than shallow ones" (nine-year-old girl); "I used tubes to make it strong and light and full of air" (10-year-old girl); "My mum helped me fold the paper, but it took us ages to keep the water from coming in" (nine-year-old girl); "My dad made mine" (eight-year-old boy); "He hasn't just made that, he's made a whole fleet" (a mother); "I used shoe polish to make my craft waterproof. It works on shoes so why not on paper?" (11-year-old girl). One comment summed the event up: "We've talked more to one another about this boat than anything else" (a father).

The idea of holding such an open-ended science and technology task arose from the wish to give families, led by their children, the opportunity to really achieve something with which they were delighted, not just artistically but technically too. If the project had been left entirely to the children some parents would have helped, others would not and the accusation of cheating made. If design ideas had been given and a tighter structure placed upon the event, the variety of craft would have been minimal and the discussion between children nil, except

to talk of prettiness. The strongest social features of the event were the undoubted interest shown by parents in comparing their family's craft with others and the delight of those professionally connected with the school in seeing so many people from all backgrounds involved.

The greatest scientific achievements were giving the children the chance to think and talk with an accuracy of language that is rarely forthcoming: floatation, displacement, draft, reinforcement, construction, joints, struts, waterproofing, symmetry and stability were words used quite freely when the children thought of the exhibition. In addition, there was the opportunity to use this language in practical experiments with a finished article.

Technically, the task required care in the design and building stages. Poor designs resulted in craft that carried little cargo or were unstable, but the accurate plans almost always produced strong, light, waterproof boats capable of holding great weight.

I have long held the belief that concepts are never truly understood until the person involved can explain them to other people. Thus the opportunity given to the children to talk about their models quickly showed their interest and knowledge and made them think logically and carefully as they spoke to people at the exhibition. Would you have the imagination and technical ability to turn a piece of sugar paper measuring 26cm x 31cm into a floating craft capable of holding 1.3kg of silver sand? The children at Wirksworth Junior School had! Try it.

John Freeman teaches at Wirksworth County Junior School, Derbyshire.

Well done

CDT Foundation Course. By M Finney and P Fowler
Collins Educational, Pupils' Book 0 00 322053 2, Teacher's Guide 0 00 327434 9

We must be very grateful for the staff in Lincolnshire for providing such a useful book. It is in itself a fine example of the design process being carried through to realization and evaluation.

As we start to teach for GCSE in 1988 we may well be acutely aware that the present fourth formers are not so well prepared as they might be for the demands of the new exams; that work in the first three years has not really been adequate in its scope for the challenge of CDT Design and Realization.

The Teacher's Guide will prove to be a valuable handbook for the Resource Centre as it provides information on preparing a course structure.

developing project management, assessment techniques and details of resources as well as suggesting a rationale and philosophy for CDT.

In particular I found the sections on project work clear and concise. The suggested Assessment sheets provided for reproduction will, I am sure, prove a great help to busy teachers unsure how best to provide meaningful continuous assessments.

Some traditional "craft" teachers may well feel a lack of confidence as they face the demands of the new exams. The section in the Guide dealing with electronics for example is full and thorough for someone new to the topic. Many suggestions for resource materials and further reading are made and ideas for development are abundant.

The value of the Guide is enhanced by 16 pages of Worksheets which may be copied without infringing copyright. As with the Assessment sheets, these will be most useful in setting up the new course.

In the pupils' book we have a complete foundation course for the first three years of the secondary school, with the Design Process clearly defined on the first page. This is then illustrated by the details of three completed projects.

There then follows a comprehensive section on the essential graphics to accompany the designing process and for the presentation of Design Folios. Many pupils will not be studying Graphic Communication as a parallel subject so this part will be especially helpful.

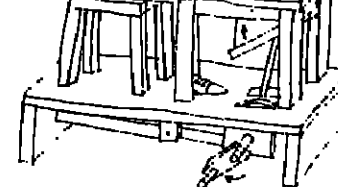
Many projects undertaken during the course may well involve electronic circuitry or energy control in a variety of forms. The two sections dealing with these topics are stimulating and factual, providing the students with sound basic knowledge. Two further sections cover mechanisms and structures in a similar way.

The book finishes with a clear explanation of the materials generally available for project work and the skills and techniques necessary for successful realization. Safety in handling tools and materials is rightly stressed throughout.

All through, the book is attractively illustrated with drawings and diagrams of consistent clarity; the text is very readable and concise. A comprehensive index is provided and throughout the text significant words are picked out in bold type making it easy for students to find the required reference.

Ted Hensman

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EXTRA

School and industry: a valuable understanding

The spice of life

MALCOLM CROWE

For some years Bush Boake Allen, spice and fragrance manufacturers of Long Mcford, Suffolk, have been showing parties of children around their factory. The pupils, after a well-conducted and informed visit, arrive back at school armed with examples of cinnamon, liquorice, mace, nutmeg, etc. and with the knowledge of where they come from, how they fit into our daily lives and the processes they go through to get there.

The visits are part of a humanities based project on the Voyages of Discovery, and are designed to make pupils aware of the importance of spices through the ages. A visitor entering a classroom with its display of spices and herbs has the impression of being in the local health shop. So successful have been the visits and follow-up work that Bush Boake Allen decided they would like to play a more positive role in relations between school and industry, and chose to sponsor a project within the Craft Design Technology department of Uplands Middle School. A sum of money (£100) was set aside for the school to use in whatever way it decided.

This new initiative was a clear development of an existing programme and showed a firm, practical commitment on behalf of one of the collaborating organizations. The very process of school and industry working together has led to a valuable understanding between the two parties and to the consideration and extension of these joint activities. It also gave the school a better understanding of the role of industry and its service to the community.

It was decided after much thought to prepare a project aimed at all third (11) and fourth (12) year pupils.

Each child visited the factory and was given a worksheet on the history of spices, where they are found, in what form and their eventual use. In addition, each received a sheet on board game design. This consisted of notes about the theme and object of the game, types of movement and playing pieces, layouts, graphics, etc. Work started with an outline of the whole project and ideas were discussed. A number of the game was designed

of mixed abilities. The problem set was to design and make a board game with all the playing pieces and equipment and the theme of the game had to be connected with the spice industry in some way. The board game project encouraged forward planning, and the need to understand a flow system both forwards and backwards. At best the project gave youngsters a feel for the excitement, challenge and satisfaction of good designing and helped them to discover and assess their own abilities and aptitudes.

The project had been used before but with no restriction on theme. To limit it to the spice industry presented a fascinating challenge. Ten hours of school time (one hour per week over the term) in the form of CDT lessons were allocated to the project and the children were encouraged to research and work at home. Incentives for the children were hardly necessary but their enthusiasm was further encouraged in the form of cash prizes/awards from the original sponsor money. Bush Boake Allen felt that good work should be rewarded and offered a large number of other prizes in the form of pens, attaché cases, etc.

Each child visited the factory and was given a worksheet on the history of spices, where they are found, in what form and their eventual use. In addition, each received a sheet on board game design. This consisted of notes about the theme and object of the game, types of movement and playing pieces, layouts, graphics, etc. Work started with an outline of the whole project and ideas were discussed. A number of the game was designed

evaluation in these early stages. Did the game present a challenge or did it last long enough? Was it possible to achieve the objective? After initial problems had been overcome a final draft was worked on.

Playing equipment was also designed; some children made cards, dice and miniature boats, and others went further, using small packets of real spice in their equipment. Some children made the box to contain the board and equipment. The graphic elements of CDT in this project are enormous, but work entered many other fields. Links with all school subjects were established, from the historical and geographical nature of the Spice Industry to its Scientific aspects.

From the huge entry, 42 games were selected for the final judging and all 42 received prizes. The games were split into two sections - third and fourth years - and prizes were equally divided between the two years. A panel of judges studied the games individually and assessed each game according to its impact, playing strength, its link with the spice industry, game equipment. Results were very encouraging. Representatives of Bush Boake Allen were involved in the judging and also in the presentation of prizes. Exhibitions of the games followed in school and at Bush Boake Allen's own open day. Bush Boake Allen's commitment to working with this school has been further enhanced in two ways. Sponsorship of two further years work has been agreed, phase two of the board game project has already started. Phase two of the project involves having some of the winning designs commercially printed and sold. This section of work is in its infancy, but already the winning games have been

The business set-up is to be run completely by a group of children and extra curricular activity. The aim is to give children an understanding of how business works by allowing them to take part in a commercial venture of their own. Bush Boake Allen will also be involved when the games have been printed and packaged. They would like to place a substantial order and use the games as a promotional material throughout their outlets in this country and worldwide.

The success of this venture could mean that other projects in the school will have some financial backing, either in the form of rewards or the financing of basic materials. Inevitably work of excellence with prizes are only using the examples of many industries who reward employees in new ideas and initiatives.

Could the game seriously way Waddingtons or become another Trivial Pursuits? I think not, but it has given the children a challenging and absorbing task and one they took to with great enthusiasm. The winning game in the fourth year, "Martin's marvellous menus", was the result of many, many hours of careful endeavour.

The way forward seems to be to capitalize on this enthusiasm and endeavour and to instigate research projects which cross the departmental boundaries within school. A child's talents should not be restricted to one departmental subject. CDT offers a good base and work started here can form a natural link with other subjects.

The use of skills to design and make an idea work is at the basis of CDT. It presents challenging puzzles to students to solve. If we are to get the most from them, if we want that little "extra", a better reward structure than the gold star or 9/10 needs to be devised. One firm's involvement has enabled us to achieve this without taking away valuable school resources. Working in partnership, school and industry can understand each other better and consolidate and extend projects and future activities.

Malcolm Crowe is CDT co-ordinator at Uplands Middle School, Sudbury, Suffolk.

CDT in the colleges

A little bit of magic

IAN ANDERSON

Two years ago, CDT in higher education, as represented by the Standing Conference of Lecturers in Design and Craft Education (CLCDE), was vigorously campaigning for increases in staffing and for more and improved resources. In an article in this journal (October 19, 1984) on CLCDE's behalf, I was highlighting our plight for resources, which was said to be impairing our earnest attempts to improve the quality of the newly educated and retrained CDT teacher. We were also seeking to increase recruitment numbers by improving our resources.

The intervening two years have seen several positive and very encouraging developments in support of CDT teacher education and the new technologies. It is now opportune for lecturers to be even-handed in their public statements and at least summarize the significant and very rapid initiatives which have taken place via a greatly enhanced CDT resources. As the 1984 CDT Extra was being read, MSC through the Department of Trade and Industry, was negotiating a £2,500 grant for new technology resources to each CDT college, provided that each college receiving a grant would in turn match the cash injection. The following year each college received a grant of about £4,000 from the MSC/DTI. The total benefit of this initiative, with 50 per cent coming from the colleges' funds was around £11,000 to

each department. This allowed many small departments to move into the 20th century, acquiring additional computers, electronic kits and equipment and even CAD/CAM (Computer Aided Design/Computer Aided Manufacturing) systems which previous internal financing would not allow. During 1985, a significant and quite remarkable development gathered momentum which has subsequently benefited a very high percentage of CDT colleges. MSC, through TVEI has practically demonstrated its considerable interest in design technology as an education vehicle and provided support aimed at developing initial teacher education and in some cases INSET for CDT.

Following discussions with DES (who themselves have been active in stimulating curriculum initiatives) and with the benefit of the advice of an eminent CDT educational consultant, MSC/TVEI identified expanding CDT departments in polytechnics, colleges and universities with an idea to the growing importance of technology. (This initiative has since been underlined by the recent Government announcement to extend TVEI into a national scheme.)

Identified in the summer of 1985, the invited to rationalize a specific case for MSC/TVEI funding. What must have been weighty and innovative documents were produced over a two-day period in the in-trays in Gray's Inn Road. The MSC/TVEI response was indeed positive. After inspecting each department and discussing the projected initiatives with management staff, contact time they have already agreed to fund colleges in these closely-related categories:

1. short-term contracts, often to pump-prime new courses;
2. Enhancement of accommodation;
3. Remodelling of existing studio, design offices and stores;
4. Provision of new and replacement machine tools, etc;
5. Upgrading equipment for the teaching of technology;
6. Provision of new equipment for the development of self-learning programmes;
7. Provision of resources and resource areas;
8. Advertising and publicity of courses;
9. Development of Access or Gateway courses;
10. Investigation of additional routes into courses, for example, pre-course provision for women, access from undergraduate courses; to PGCE courses (alternative qualifications such as BTEC and Art and Design Foundation courses);
11. As a spin off from the above, the development of in-service provision.

Additionally, a short-term, small-scale, recruitment publicity campaign was mounted for specific vacancies on CDT (and Business Study) courses for 1986-87. National press coverage generated a very encouraging response and, in particular, one polytechnic is considering mounting an additional course to cope with increased demand. Today, within the 12 months of the initiatives crystallizing, a very high percentage of these initiatives, which could not have been funded from any other source have been executed.

It seems like magic. This demonstration of the power of an enlightened and well advised change agent should have substantial and long term benefits for our CDT teaching force. By way of example, in my own college, as a result of combined curriculum and financial initiatives by DES, i.e.a., college and MSC through TVEI, departmental in-service recruitment has almost doubled in 12 months from 24 full-time students to 46. This new short course members. It

this is reflected in the 20 other colleges nationally. The MSC/TVEI approach which clinched many deals was twofold. It is interesting to note that Technology and Design Technology is presently under consideration by the DES (along with other subjects) like maths and physics.

The colleges are now offering a wide and interesting range of design technology initial and in-service education opportunities with well resourced, modernized or extended teaching accommodation. Young staff have been recruited (with MSC/TVEI help to start with) who are expert in design, graphics and the new technologies. There is a lot of exciting work going on within the colleges.

The initial teacher education courses, BED, BED(Hons), BEd(Hons), PGCE, etc are offering young teachers bright career prospects, some probationers being appointed from college on above a Scale 1 point.

In-service courses are now being offered for almost every need. The rich and varied national picture includes MEd, MA, university and polytechnic diplomas, college certificates of advanced study, retraining courses, a week curriculum study course in heads of subject and in the north-west a consortium of six i.e.a.s and other colleges are running a TRIST (to start with) pilot project to recruit teachers from other disciplines on to two years, the teachers spending an equal time in colleges and schools. Short DES, college and i.e.a. courses abound and are fulfilling educational needs.

The National Advisory Body for Design Technology (NAB) is currently inviting bids for further shortage subject initiatives. In 1987-88 could see more creative people developed in the good news this year. However, we really need to see another benefactor to perform a more magic. We desperately need to extend for a minimum period of two years, the fixed-term contracts for temporary lecturers who are brought in to fill gaps in the curriculum. Without them, our extended course will grind to a halt!

Ian Anderson is principal lecturer in Head of CDT, Edge Hill College, Higher Education.

EXTRA

Challenge and response

Conflicting aims

BERNARD DOWN

Over the last few years, many teachers have found it necessary to modify their teaching method and even subject content, but none more than the teachers of CDT. A multi-faceted revolution has been going on in the workshops, which has had its impact on other curriculum areas. The causes of the revolution are many and complex, but its goals need continual reappraisal. The tinkering-on of "design and technology" to the simple title "craft" makes explicit many of the changes. We are all aware that our society has come to be dominated by technology, and we have been told by no less a person than the Prime Minister that design education is needed to halt our economic decline. The salvation of the new technological age is to be found in the transformed woodwork and metalwork shops.

A new authority, knowledge and set of skills are demanded of the former craft teachers. Their subject content has been changed to a combination of art and science. Their method of teaching has altered from a simple transmission model to a more child-centred, problem-solving model. Girls have joined the classes and the brighter pupils have been encouraged to see the relevance of the Third Culture. The new curriculum has been seen as offering an education, if not a training, for industry. At the same time, the synthetic nature of design and the applied nature of technology has made CDT a possible source of liberalizing tendencies. How can all these new objectives be successfully accomplished? How can the conflicting aims be reconciled?

Four changes at least are necessary for the revolution to be successful:

- 1) in-service and initial training changes, including training in the new technology, training in design thinking and training in new materials and workshop;
- 2) change of attitude towards the subject by parents, other staff, the DES and the universities;
- 3) changes of tools, machines, materials and workshop;
- 4) collaboration with other departments, especially physics and art, and movements towards greater curricular integration.

There has been an unevenness of response towards these needs. In-service courses that can transform, say, a woodwork teacher into a competent educator in electronics are still rare, and many teachers have to provision at least part of their own funding. However, a more fundamental problem is that the knowledge, skills and experiences and commitment of a good

craft teacher do not necessarily provide the background for a design or technology teacher. There must be a limit to what training, retraining and attitudes of a lifetime cannot be changed overnight. Newly trained teachers, are needed, if the masculine image of the workshop is to be reformed. But such staff are not easy to recruit. The peak year for qualified women CDT teachers was 1978/79, and even in the under-recruited CDT, only ten per cent of the group. Besides, it also looks as if the market forces, so beloved of the Secretary of State, have taken their toll of design and technology graduates from school to industry.

In the past craft found most favour with the less able pupils. Has the position changed now? The subject is taught initially on a rotational basis with domestic science, needlework and the arts. Girls are often arranged so that there is an overlap between girls' and boys' practical subjects, with the result that there is a reversion to traditional choices. The more able have relatively seldom taken technical subjects at GCE, despite the fact that practical subjects seem to provide satisfaction to the pupils concerned. The reason for the rejection of CDT is not hard to see. For girls CDT is still a strong masculine image, and there are those who would advocate the physical sciences as a better preparation for engineering. Last year's Vice-Chancellors' Report on University Entrance posed the problem many faces; it combined advice not to choose subjects which predominantly involve practical skills, with the opinion that acceptable subject combinations should include a practical application of scientific principles.

There is a call for different types of workshop, machines and tools, depending upon what model of CDT is being advocated. Some models lay less stress than others on the production of hardware, and a design-oriented model is different from a technology modular approach. There is variable success in achieving the type of workshop the CDT teacher needs, partly because of the enormous cost involved, and partly because of the status by which the subject may be held in school and by the local authority. Some schools, with TVEI assistance or parental contributions, are well endowed with electronic

kits and computer facilities, while others doubt the necessity for the latter, lack the former and may even cry out for basic materials.

The HMI paper on the curriculum advocates that each subject should contribute to many areas of understanding, so that technology is taught across the curriculum, and that educational implications are drawn from science, mathematics and political education. All this calls for cooperation between the various departments, so that the CDT teacher in the problem-solving approach applies the concepts and principles of technology as taught by the physics teacher, at the same time as raising social issues about technology that are more appropriate to be considered in moral/political/education lessons. This level of collaboration is difficult to sustain. The history of education since the 19th century has seen a struggle for technology and technological funding between the physical sciences, advocates of autonomous technology or engineering, and the CDT area. In the late 1970s pure science continued to receive the prestige and resources, at the expense of science and technology. Today many science teachers would argue that because of their training and competence, technology belongs to the sciences. There are, however, signs of greater collaboration.

The present position, then, is far from clear. Within the various school departments teachers have different attitudes towards design and technology. The result is that different models of the subject have emerged. What is best for society, with the amount of time allowed in schools, needs further consideration. There are those who argue that with more unemployment and leisure, greater attention should be given to the skills that are required in the home. Others want technology, but with a different emphasis, particularly for the sake of girls. They argue that technology is in danger of being defined as the sum of civil, electrical and mechanical engineering, thus ignoring other essential areas. There is a lack of consensus between teachers, the DES and teacher-trainers about the aims of CDT, which is bound to affect the slow changes of attitude by the public and the universities. More training, financial help and above all more debate are required before this former Cinderella subject becomes the Queen of the curriculum.

Bernard Down lectures in the philosophy of education at Brunel University.



"Martin's marvellous menus", the winner of Uplands Middle School competition to design a board game (see opposite page "The spice of life").

Are you ready?

TED HEASMAN

Have you faced up to the implications of CDT Design and Communication yet? Are you, like me, teaching 25 in a fourth year class preparing for the new exam?

This number is fine for traditional Technical Drawing, but are we really giving all the candidates the opportunity to do their best under the new requirements - in one year's time my students entered for the Southern Examining Board exam will be involved in two terms project work of almost endless variety. I anticipate this will be as demanding of me as it is in the workshop.

However, numbers apart, are you ready to teach Design and Communication with regard to equipment? Are you prepared with coloured pencils, inks, water-colour, paints and brushes, felt markers, air-brush etc - all these and more are essential ingredients of the syllabus I have seen.

Is your room ready with the appropriate areas set aside where this work can be carried out, the equipment and work in progress stored? Again, modelling is required which will need materials, equipment and space for storage.

Have you made room for your computer yet? Do you have a dot matrix printer or perhaps a three colour printer readily available? CAD is a core curriculum requirement in some syllabuses but I would suggest that the provision of this equipment is totally inadequate.

Staff need time to update them-

selves on the potential of this area of knowledge and the students need to be able to get hands-on experience in the environment of the design complex.

Software for the computer is only one aspect of a resource library we need - I know we shall be able to make room for this by discarding the sets of dog-eared, coverless books by Yarwood, Maycock, Freebury, Jackson etc so lovingly used and preserved over the years but project requirements will dictate that we have to hand a wide variety of books, magazines and so on for ready reference.

Here also I would include photographic records and video recordings as both are suggested as ways in which candidates work can be presented for assessment or moderation.

The implications and challenges of CDT Design and Communication are many and varied. I am sure I shall find my students responding to the stimulation of this work but I am painfully aware that I am unprepared, my room lacks many of the facilities I need, the resource library is pathetically thin at the moment but expanding weakly, and that the room is too crowded with 25 henchmen, growing 15 year olds.

I am conscious that the boys and girls may suffer because of the strains and constraints of the situation. I shall, however, do my best not to let it happen. How will you fare?

Ted Heasman teaches at Bishop Bell School, Eastbourne

Musical instrument making and repair

All strung up

IOLA SMITH

The Welsh School of Musical Instrument Making and Repair celebrates its tenth anniversary this year. Established as part of Mid Glamorgan's Further Education provision and affiliated to Ystrad Mynach College of FE, its full-time courses teach violin-making and piano restoration to professional standards so that students can start their own business when they leave.

Students range in age from 16 to 45, and about two-thirds come from South Wales. They are taught by professional craftsmen under the direction of the school's Principal, Miranda Green, and can specialize in either violin studies or piano.

The three-year string instrument course teaches violin, viola and cello making in the style of the old Italian masters, plus repairing instruments and maintaining bows. Says Miranda Green, "Supplementary classes in woodwork, art, technical drawing, and music are also offered. The aim is to create original violin designs and to produce instruments of high quality and sound."

A metalwork class featuring tool-making is also important, as making their own equipment can be a valuable asset to students. Yet, even with

this DIY method, they have to spend £2,000 on tools and materials, often without grant aid.

During the first year, each student makes four violins using six-year-old wood which has been dried in air to prevent warping. One of these instruments must be donated to the school, or by local schoolchildren. By the end of year three, students can produce violins in under 200 hours, and additionally they make a special study of a less common instrument such as the lute. Finally, they sit a six-week-long violin-making exam, after which the instrument is assessed for craftsmanship by foremost London maker, Charles Beare. It is on the strength of this assessment that a college certificate is awarded.

According to Miranda, "The piano course takes two years and includes tuning, maintenance and restoration as well as an investigation into the instrument's history and acoustics. By the end of the course, students can fully restore upright and grand pianos, can tune an instrument in two-and-a-half hours, and can repair a broken

following autumn. All must display an interest in their chosen instrument, although they don't have to be players. Evidence of having visited makers' workshops or exhibitions is also expected, while patience and dedication do exist for makers overseas, especially in Scandinavia and the Far East.

Yet, despite the general lack of cash, Miranda Green is certain that it is a worthwhile, enjoyable occupation. "There is the satisfaction of having created something which can subsequently be used by someone else to create new music," she says.

Liaison with local secondary schools and colleges is encouraged. For example, pianos from neighbouring St Martin's Comprehensive and Lewis Girls' Comprehensive have recently been repaired at the school, and a Welsh College of Music and Drama harpsichord restored. It is likely that an even closer relationship will be established with the Welsh College of Music and Drama, with staff from both colleges contributing to each other's classes. A start will be made during the school's anniversary concert, as the instruments will be played by WCMD's students and staff.

Miranda Green is convinced of the need for greater contacts between makers and performers. She cites the case of school orchestras, and the problems which can occur when instruments are in need of repair.

At the end of the course, students find themselves looking for jobs. There are only limited openings for violin-makers (a price tag of between £800 to £2,000 puts such handmade instruments beyond most schools and

parents' pockets) so repairing is the more viable option. Those who've studied the piano course can also make a career in tuning.

Despite its romantic image, instrument making in Britain isn't usually a lucrative career. Opening, however, do exist for makers overseas, especially in Scandinavia and the Far East. Yet, despite the general lack of cash, Miranda Green is certain that it is a worthwhile, enjoyable occupation. "There is the satisfaction of having created something which can subsequently be used by someone else to create new music," she says.

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parents' pockets) so repairing is the more viable option. Those who've studied the piano course can also make a career in tuning.

SAMURAI JAPANESE TOOL GUIDE & CATALOGUE

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EXTRA

Materials testing equipment

On a shoestring

Regardless of individual opinion or criticism the start of this academic year of secondary education has seen the introduction of the highly publicized GCSE. This has inevitably meant change in all subjects to a greater or lesser degree and CDT is no exception. Knowledge of the characteristics and properties of common and some specialist materials is now a specific requirement of the Common Core in CDT Design and Realization, Design and Communication and Technology. It has always been a mystery to me how anyone could contemplate design without some prior knowledge of the resources they intend to include in the final realization. Many children have in the past been forced into this situation, thankfully one of the changes implemented by GCSE CDT may alleviate this somewhat.

When asked why little or no materials teaching has been included in CDT, teachers quite rightly blame the lack of testing equipment and/or funds to purchase test facilities. It was with this in mind that we at Brunel (Runnymede Campus) are developing a range of micro-computer (BBC/480Z) interfaced materials testing equipment that can be built on a shoestring. The final designs are capable of fabrication in a school workshop, will provide a good area for sixth-form development and should provide good, reproducible, reliable results.

The complete range of equipment will cover the testing of hardness, impact and tensile strength, phase solidification and the creep properties of materials in regular use in any school workshop or technology laboratory. The first of these is a creep testing rig complete with environmental chamber that is capable of testing samples at loads between 2-2000g and temperatures up to 125°C. The duration of test and interval between measurement with results being stored on magnetic disk.

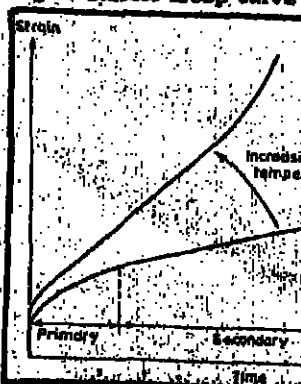
The cost of the equipment has deliberately been kept down to the absolute minimum and there is no doubt that increased expenditure would improve resolution. However, the rig shown in the photographs has been used by students over the last year and has performed admirably.

Creep
The BBC-B is supplied with an integral analogue to digital converter, consequently when interfaced to this microcomputer the parts shown in the top section of Fig 3 are not required. No provision has been made for analogue to digital conversion on the 480Z and the components above the dotted lines will fulfil this function, the digital output from the converter being fed into the 480Z via the "user port" input lines. The BBC-B also has in-built facilities for reading its internal clock, but unfortunately the RML 480Z comes without the integrated circuit needed for real time timing. Rectification is a matter of removing the case, inserting the missing chip, a 280 CTC (RS Components 304-326) and supplying the necessary software.

Output to control the heater relay for both models of microcomputer is obtained from the "user port", extra "user port" output lines on the 480Z being employed to reset, select channel (sample extension or chamber temperature) and start conversion in the external analogue to digital converter.

Calibration values for extension/voltage and chamber temperature/voltage have to be determined experimentally after the equipment has been constructed and are a crucial part in its commissioning.

Fig 3. Classic creep curves



RAY STROUD

BBC-B computer connections
Analogue 15 pin D-type socket

	Pin	User port	Pin
+5v	1	0v	5
0v	6	OUT 2	10
"E"	15		

Research machines 380/480Z
User port 25 pin D-type socket

	Pin		Pin
OUT 0	5	IN 0	1
OUT 1	18	IN 1	14
OUT 2	6	IN 2	2
+5v	9	IN 3	15
0v	22	IN 4	3
		IN 5	16
		IN 6	4
		IN 7	17

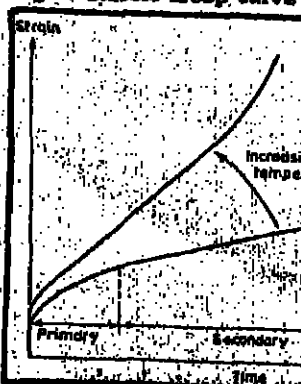
and the graph plotted "manually". At loadings of 10kg this test takes typically 20 minutes to complete but for other materials and lower stresses tests can take many days, weeks or even months. In order to cope with long-term testing the equipment has been interfaced with a microcomputer. This enables it to take readings automatically and print graphs and lists on completion of the experiment. It is worth noting that the fulcrum pivot should be a ball-bearing or at very least a well engineered plain bearing.

A second lever is used to amplify the extension in the sample to drive the moving contact along the track of a linear potentiometer (RS Components 162-940). If a reference voltage is placed across the potentiometer's track, extension in the sample becomes directly proportional to the voltage at the slider of the potentiometer. At pre-decided intervals the voltage is sampled, converted into a digital signal and stored on magnetic disk. On completion of the desired number of readings or rupture of the specimen (ie reaching maximum voltage) the test is automatically terminated and data file closed. Detail of the "transducer" arrangement is shown in Fig 4, and the theoretical wiring detail in Fig 5.

It is possible (but not mandatory) to control the temperature of the material under test using a simple environmental chamber. Heating is achieved using resistance wire (or large wire-wound resistors) connected to a low voltage power supply. In order to avoid localized heating of the sample, air is circulated continuously using a small fan (hair drier). The temperature within the chamber is measured using a miniature thermistor (RS Components 304-326), after amplifying the signal from the amplifier the microcomputer compares it with a previously determined value. If the chamber is too hot the supply is disconnected from the heating elements using a relay. If too cold the supply is maintained or reconnected if switched off. By sampling regularly good control can be achieved with little hysteresis effect. Full circuit detail is shown in Fig 3.

The BBC-B is supplied with an integral analogue to digital converter, consequently when interfaced to this microcomputer the parts shown in the top section of Fig 3 are not required. No provision has been made for analogue to digital conversion on the 480Z and the components above the dotted lines will fulfil this function, the digital output from the converter being fed into the 480Z via the "user port" input lines. The BBC-B also has in-built facilities for reading its internal clock, but unfortunately the RML 480Z comes without the integrated circuit needed for real time timing. Rectification is a matter of removing the case, inserting the missing chip, a 280 CTC (RS Components 304-326) and supplying the necessary software.

Fig 3. Classic creep curves



The original software was written in SBAS for an RML 480Z and uses high resolution graphics for plotting results. This has subsequently been translated for use with a BBC-B. All of the software has been written using procedures; therefore translation for use on another machine (for example, 380Z) or the removal of unwanted features should not prove too much of a problem. It is "menu driven" and comprises a suite of four programs.

The main menu offers the choice of:
1) running a creep test
2) printing results
3) plotting graphs
4) ending

The three applications packages can be selected from the main menu and taken in menu order consist of:
Creep - the main data acquisition and rig control program opens a data file, prompts for test material, temperature and load then writes this detail to disk. The interval and total number of samples required, maximum possible extension and initial length of the sample are stored and the test begins.

and held at the selected test temperature for a minimum of 10 minutes after which sampling is allowed to commence, the load is applied and the clock started, the reading and recording of extension is taken automatically at the required time intervals and the chamber temperature checked every second. If the total number of readings is exceeded or the sample fractures the datafile is closed and control passes back to the main menu.
Readout - a selected number or all of the test results in a selected datafile are printed on the screen or sent to a printer together with all test parameters (material, temperature, etc).
Graph - plots graphs from selected datafiles either on the monitor and then will transfer the graph to a printer (if the printer has a screendump facility).

Extension data stored on disk is in the form of the digital values obtained during analogue to digital conversion of test piece extension. Readout and Plotgraph convert these values to millimetres using calibration constants which are different for each test-rig. Instructions on how to derive these and calibrate the thermocouple will be supplied with each set of software issued. The software is free to anybody who sends a blank formatted disk to Ray Stroud, Brunel University, Runnymede Campus, Englefield Green, Egham, Surrey TW20 0JZ.

Fig 1. Four stages of creep

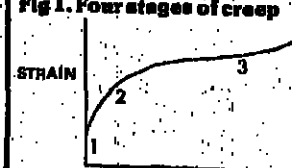


Fig 2. Simple creep testing rig

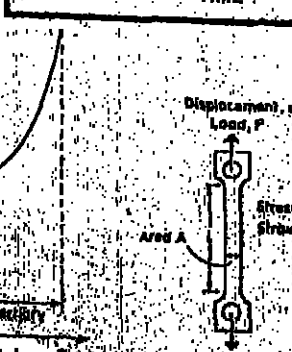


Fig 2. Simple creep testing rig



Fig 4. Extension transducer

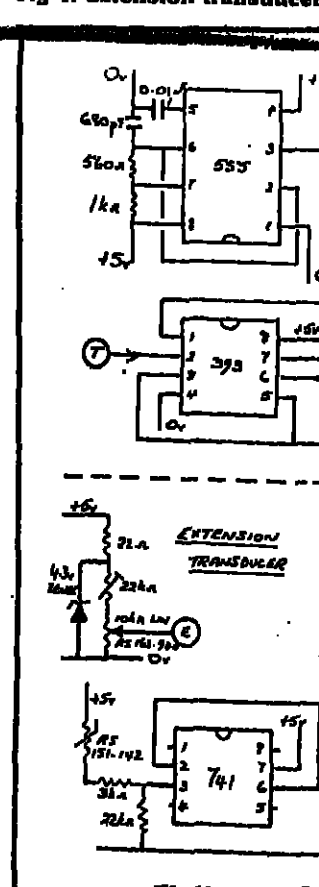


Fig 5. Theoretical wiring diagram



Fig 6. Environmental chamber

Fig 6. Environmental chamber

Words on paper

CONTINUING EDUCATION

Write On
Channel 4, Yorkshire TV
Mondays 6.30 from October 13
SIC, Thursdays 6.30 from October 16.

"I'm quite aware Shakespeare didn't write essays, but he would have done if he'd been in my class." So speaks a gloriously accurate parody of a 1950s English teacher at the start of this 10-part series made for Channel 4 by Yorkshire Television, in conjunction with the Adult Literacy and Basic Skills Unit.

Called *Write On*, it should not be confused with those BBC 10-minute programmes called *Write Away* and *Write Now*. They were concerned to teach basic skills. This new series is mainly for those who are literate, but victims of dreary English teaching.

A course in creative writing for adults, its expressed aims are to "stimulate interest in writing... dispel misconceptions and fears and improve people's confidence in their writing abilities". As one of its presenters says, "Think of us as a cookery programme. We're trying to show you how to bake a better loaf of bread. We're not trying to turn you into a professional baker."

The programmes are a mixture of film reports, brief dramatizations and studio chat. One presenter is Ruth Pitt, a YTV reporter who jabs her cheerfully through her autocue at us, obviously reading a script yet pretending to be chatting about the differences between spoken and written English. The other presenter is Ian McMillan, a relentlessly ordinary "author, poet, performer and writer-in-residence". He professes to understate himself to prove that (even if he is a writer) he is still "a man of the people".

There is, however, obviously a very good support team under the guidance of producer David Wilson and the series is in fact very much better than its presenters. It starts skilfully with a programme subtitled "From Talking to Writing". This features the Yorkshire Arts Circus, an organization which encourages people to talk about their memories and persuades them to write down their experiences. "If you can talk, you can write."

The second covers two somewhat disparate topics. First we are shown the need to plan what we are going to say on important occasions, such as making a speech at a retirement presentation. Then we are told of the value of getting words on paper without hesitation (or thought). Later programmes cover note-taking, the development of notes into polished writing, the expression of feelings in poetry and narrative, joining (or starting) writing groups, and research.

Watching some of the novice writers shown early in the series, it is tempting to sit back and tell them to "forget it". Despite Ian McMillan's repeated promise that "everyone can write", they fairly obviously can't. But that is precisely why this is ultimately a valuable and helpful series. Those who stay with it will develop a confidence, a readiness to put words on paper - simply for their own satisfaction.

David Self

CHILDREN'S TELEVISION

TV, Tuesday 4.20pm.

When Ma Mossop has to go away suddenly, she is naturally anxious that someone will look after Tatters, her cat. A little anxiously, Franny and Colin volunteer, and soon Franny at last is winning the battle, for Ma has hardly closed the front door when things start to happen. From being a young viewer's favourite of 72x1, *Thames Television's* *Ma Mossop* is a fast-paced 13-part adventure series for children. Nothing at all to do with the hickety carriage trade, it takes its name from the fact that Ma Mossop runs a sort of junk shop in the old-fashioned house occupied by the old Auntie Bureau.

Fast and furious

remains to be seen, for, despite a convention that critics do not reveal crucial twists in the plot of whatever book, play or film they are reviewing, *Thames* have limited themselves to sending out its sparse five-line press-release and showing only one week's episode to previewers. Hence it is difficult to see how (or indeed, if) the Egyptian hieroglyphics in the title sequence fit into the story. Only time will tell.

At present all that can be said is that Denise Coffey's script is well judged and exactly the sort of thing which will grab and hold an audience of nine to 13-year-olds. It is sophisticated in its story-telling, they are used to the *A-Team*, *Damney* and *Makepeace* and now, in all probability, *Call Me Mister* after all) but still preserves an intangible respect for the fact that it

MEDIA



3D to K9

Sheila Ebbutt on the Dr Who approach to mathematics

SCHOOLS TELEVISION

Wondermaths
BBC2 Tuesdays 11.40am
Repeated Fridays 11.00am.

Thanks to Cockerfoot, we are all allowed to acknowledge that mathematics is a difficult subject both to teach and to learn. Okay, so what do we do about it? Nothing can replace well-organized INSET, with teachers gaining mathematical and educational insights from discussion and interaction with colleagues. But resources, for teachers and children, do help, and *Wondermaths* is the latest television resource to tackle the challenge set by Cockerfoot and the problems highlighted by the Assessment of Performance Unit.

The aims of the programme are laudable, with all the right-sounding buzz words: "mathematical thinking as a tool for problem-solving", "value of approximation", "pattern recognition", "modelling in investigational work". There are 10 separate programmes for average ages 10-11 years, each self-contained and designed to be recorded and used as appropriate.

Black presence

SCHOOL RADIO

Black British
September 15-19.

Are black British-born people today condemned to be "synthetic English"? Jean, a black music teacher, used this phrase to highlight a predicament in the series *Black British*, produced by BBC School Radio. It is intended to help teachers show that there has been a black presence in Britain for the last 400 years and is based on the lives of the community.

Oludayo Equiano, the sailor, Mary Seacole, the nurse, Ira Aldridge, the actor, Samuel Coleridge-Taylor, the composer, and Shapurji Saklatvala, the politician, all challenged accepted notions of race and colour, but in the end they were only confronting the effects of prejudice and not its causes. The dilemma is not only how one achieves recognition but how one advances the cause of black people.

Equiano was born in what is now Nigeria, in 1745. After being kidnapped into slavery by other Africans and taken on board a ship with a white crew, he experienced a life of brutal cruelty. But he fought subversively,

and by trading in goods that he bought on his voyages, eventually managed to buy his freedom. Mary Seacole was born in Jamaica in 1805 just before slavery was abolished. Skilled in healing, and nearly 50 when the Crimean War began, she was determined to go out to the front. She faced every rejection from the War Office and the office of Florence Nightingale's team until she went under her own steam (she was not a convalescent home in the Crimea. A character of "judicious decisiveness", she could not accept the fact that she was rejected because her blood "flowed beneath a dusky skin".

Both Ira Aldridge and Samuel Coleridge-Taylor found doors slammed in their faces when they commenced their artistic careers. They challenged popular notions of the place that black people should attain in a white society. The versatile Aldridge was not content to play the comfortable assigned roles of Othello, an obstacle faced by black actors today, who are condemned to play stereotypical roles. And Coleridge-Taylor drew inspiration from the black traditions of the USA. His mission was to show that the black culture was both "civilized and dignified".

Both men found success overseas - Aldridge more honoured in Europe than in England, and Coleridge-Taylor in the States. Shapurji Saklatvala, the communist Member of Parliament for Battersea in the Twenties, owed allegiance to his constituents and fought for the rights of Indians colonized by Imperial rule. An eloquent orator, he was sent to Wormwood Scrubs for asking soldiers not to fire on workers during the General Strike of 1926. But the worst punishment came when he was banned from visiting his country, India, after he had spent three months there in 1927, urging trade and peasant organization.

The series is well produced, with distinguished black actors and brings alive the temperament and concerns of its subjects. Post-programme discussions are sketchy, but with skilful classroom management the series could lead to useful debate on parallels today or on what the outcome would have been if the five had had greater impact on their own communities. The teachers' notes are well written, with a useful booklet.

Uma Ram Nath

briefings radio & t.v.

For schools

GOING TO WORK
(Monday, 9.38 BBC2)
"Helping the Unemployed" brings home to 14 to 16-year-olds the reality that they may not find a job. Here five young people explore ways of finding help.

ZIG ZAG
(Mon 11.00, Wed 14.15 BBC2)
"Mordicus the Buzzard" is a two-part adaptation of a networked programme where film of buzzards is edited together to make a wildlife drama.

PAST THIRTEEN: CHOICES IN THE THIRD YEAR
(Monday, 11.22 BBC2)
What subjects are on offer at the end of the third year? How can you choose? Two third-year pupils set about making their choice and fifth years discuss whether they made the right choices.

HORIZONS DE FRANCE
(Monday-Friday, 00.30 VH4)
New programmes and updates provide listening comprehension material for students working to O level and GCSE.

A RADIOVISION HISTORY OF BRITAIN
(Tuesday, 14.40 VH4)
"Early This Century" presents a picture of life in Britain between 1900 and 1919. The 12-year-olds see the importance of social and technological changes.

JUNIOR MATHS
(Wed 9.59, Fri 10.09, ITV)
What is a line? This programme looks at the way a path can be made up of a succession of points. The Mad Mathematician encourages the over-sevens to enjoy lines as spirals.

THE ENGLISH PROGRAMME
(Wednesday, 10.33 ITV)
"President Ronald Reagan" presents "The Writing of Splitting Image", the first of five programmes on comprehension. Fourteen to 17-year-olds get a "behind the scenes" look at the puppet show.



4 Titles available for recording from Sunday 19 October 1986

Approximate Transmission Times

Day	Time	Programme
Sunday 19 October	5.15	The Big Bang Programme For Code F
Monday 20 October	6.00	10.30 Living With Schoolwork For Code B
Tuesday 21 October	6.00	10.30 Living With Schoolwork For Code C
Wednesday 22 October	6.00	10.30 Living With Schoolwork For Code D
Thursday 23 October	6.00	10.30 Living With Schoolwork For Code E
Friday 24 October	6.00	10.30 Living With Schoolwork For Code F
Saturday 25 October	6.00	10.30 Living With Schoolwork For Code G

For details of the scheme, and any other information, contact Paul Fawcett at GUILD LICENSING, 8 Rye Road, Peterborough PE1 6YB (0783) 515318. Late Changes (0783) 352152.

The Guide to British Independent Schooling

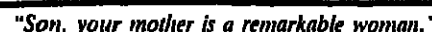
An invaluable publication for those parents seeking independent education for their child.

It contains a directory of schools plus many other facets of schooling.

The cost is £2.95 post free and is available from Surrey Publishing, PO Box 666, Esher, Surrey KT10 9RA.

Things miraculous and spiritual

The work done on the brain, Walker shows, has made the idea of a simple, *linear, sequential* nature leading to *unintelligible* different aspects of brain structure together with related *concepts* into quite the wrong place. At the same, he argues, retrospectively considered it must be admitted that some sort of evolution, whether from worse to better, or from simple to sophisticated has occurred, an idea that can be justified, in his view, if one adopts an explicitly anthropomorphic standpoint. He goes further, and writes elsewhere, in asking questions about

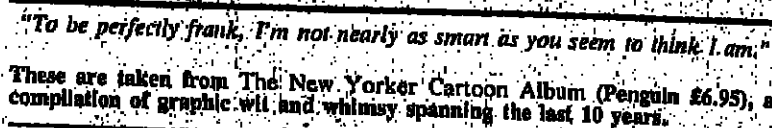


to make the nature of other animals intelligible, in that the human animal must needs be the point of reference in terms of which all else is, and can be, discussed. The questions asked are hence inevitably one-sided and give knowledge of what other animals feel, smell, taste etc, so far as they can be assumed to have capacities basally akin to those of the human animal.

Whether (supposing the impossible possible) that

Pierre Watter

Robert Ornstein's classic *The Psychology of Consciousness* has now been revised and updated (Penguin £4.95). Much has happened in the field since its original appearance in 1972, with its revolutionary synthesis of the left brain/right brain, rational-versus-creative ideas.



Certainly, there are illustrations of the benefits of new technologies: with handicapped children (Gianna Marinengo) or in improving arithmetical

skills (V. Botkin). And there are national reports suggesting that the extension of computer provision at all levels is a good thing in itself, perhaps implying that learning such things as programming may be a training for the mind. This assumption, criticized by J. Habsbratt, is: the basis of those BTWC courses which include "problem-solving" as a distinct unit on the curriculum, or to formulate a "Communications" syllabus, or entirely in terms derived from the information technologies. Habsbratt, from France, and contributors from Denmark, Italy and elsewhere, are rightly dismissive of any approach that ignores the value of insight, intuition and the use of words and signs language as merely a tool for communication.

Problem-solving, as the Habsbratt points out, "depends heavily on

particular discipline in which the problem is formulated" and otherwise, as anyone who has been asked to teach it will know, is a concept with "almost no semantic content". As for language, the elegance of machine models for its function as a communicator of messages has seduced too many people into thinking that this is the only function, a view against which Steen Larsen argues persuasively. If such conference proceedings have any broad interest, it is when they provide more than the usual "exchange of views". The more, in this case, if the need fall by several constituents to stress that "a computer is only a tool, and the scepticism with which they examine some proposals for its application to education.

Robert Rouse

We are reminded that the values of compassion and concern are central to an overview of medicine, and that it is generally agreed that today's specialists and students need to be told so many facts that they have little time in which to consider their implications, we neglect these at our peril. In his final chapter he argues that attitudes that determine how, where and where knowledge and skills are used will be exercised . . . Action is not just justice. They have a background in thought".

Vicky Chubb

Suspects, by David Thomson (Price: £3.50). Thomson duly rounds up the usual suspects by providing observed, haunted and previously one-dimensional celluloid characters with the after-the-lust-reel. This specialist tonalized tribute to film noir, cleverly links some unlikely individuals through its captive narrator. Bizarre, inventive and written in near prose speak.

Elleen Bakken



record of a trip by four to six-year-olds from Soho Parish School. On his

picture young Bob Man wrote in "Light's" A four storey house in the middle of a lush green landscape of balsam wood (with lights) was the impressive result of a series of architectural drawings by W. Mwaru aged 10 and Ken Saito aged 11, from St George the Martyr School. Netley School presented the delightful animal line drawings, such as clay animals, while the children modelled from their own ideas for a project on the Arctic.

The exhibition, collated by Stephen Armstrong, primary advisory leader in H.E.A. Division 2, also provided a glimpse of various materials used in art, and a pair of boots being hand painted in rainbow camouflage.

inspiration.

1 Freshman in our power (6)
2 Blinding Shakespeare put to the sword (6)
3 Fought against being declared redundant (6)
4 Some pose change for a literary pirate (6)
5 Major news decades are viewed (6)
6 School keeps us in station (6)
7 They should be able to identify any city
8 at a minimum (8)
9 They may take a little time (6)
10 Old pieces of money (6)
11 Call for a shower (4)
12 Poet who makes a big hit in American
13 is judgment (9)
14 Tightly spoken - they're a means of
15 population (5)
16 What a tedious way call for a continent
17 breakfast? (4)
18 Unmarried sister (3)
19 He expects some scholar about the begin
20 of the century (6)
21 Not a short case in arithmetic (4,8)
22 Refuse to observe a request for silence (3)
23 What they do, and what they don't
24 perform with to their character (12)
25 Performed with a high degree of skill (12)
26 Port area (4)
27 The ghost of Shakespeare, some say (5)
28 He is to blame and won't worry (5,4)
29 Legal way to prevent a gathering of poets
30 (6)
31 Romance books on it (4)
32 History takes fish without permit (8)
33 Angry fighters over the bunsen
34 burner (6,7)
35 Members of this society have a lot in
36 common (6)
37 Car owner in distress - showing it (8)
38 This poet makes understating study (6)
39 On the better of the teacher (8)
40 She's been taught after midnight, yet
41 goes for love (6)
42 She's in peak form in a Crete (3)
43 Purposeful employment (3)
44 They are to down New calculating rules
45 for mathematics (8,8)
46 Clean up on the favourite, darling! (6)
47 Film form (6)
48 A quality of mercy (8)
49 A (4)
50 A lot for mathematics (8)
51 Roll a hand out, drawn by geometri-
52 cal lines (12)
53 Several groups possibly remain on a board
54 (6)
55 Where barbers get refreshers (4)
56 Traditionally it is applied to the back
57 of the head (3)
58 Musical class of university students? (4,5)
59 Love a note repeatedly played in the
60 orchestra (4)
61 Musical class of university students? (4,5)
62 Romeo? (7)
63 Lady describing, pagan (6)
64 Old singer who makes a scalene triangle
65 (7,5)
66 Back and back when it is out short (3)
67 Examining room look first and speak
68 afterwards (12)
69 Fretful course explored by the physicist
70 (6)
71 Don't be one and a half to be played (3)
72 Let it be kept in the square in another (4)
73 Let it be kept in the back for talking
74 (6)
75 What's been anything new to his
76 (6)
77 The (4)
78 Of Troy's ruin (5)
79 How came top (4)
80 Possibility a note between Latin revision
81 (6)
82 Not thought to be like Queen Victoria?
83 (6)
84 The (6)
85 The (6)
86 The (6)
87 The (6)
88 The (6)
89 The (6)
90 The (6)

- 134 A river - doesn't sound like the Deel (3)
- 135 It may be recommended as a sun resort (8)
- 136 One engaged in a Red Cross operation (8)
- 137 They may carry out services on a summer (8)
- 138 Made to smile by a thought? (6)

now

- 1 It's very hard yet maths revision is essential (8)
- 2 Eat chips in a way that's not original (8)
- 3 Features in botany and arithmetic (4)
- 4 Telling voices rant on, wildly (12)
- 5 Inventor of the telephone - or part of it (4)
- 7 He stole something to get safely down to (8)
- 8 Plan to uplift American soldiers in retreat (6)
- 9 A sleeping partner who was robbed of his essential assets (8)
- 10 Back beer held up, but put down again (6)
- 11 Rack one's fancy in a leisurely car? (4)
- 12 The aim of equal education? (7.5)
- 13 Fighters? (8)
- 15 State carriages? (8)
- 16 Rise clumsily to get Heather some wine (8)
- 22 Public agent employed by mathematicians (6.6)
- 23 An incoming charge (9.3)
- 27 Crackers - or what they're required for? (4)
- 30 They appeal to lively children or rising politicians (5)
- 31 Eight kings of England were entitled to be called it - (3)
- 32 The Hussars held captive in battle (5)
- 34 Dlx drunk - or dat? (5)
- 37 Influenced in an unnatural way (8)
- 38 Grey is to study Maugham's work (8)
- 39 School-break period? (4-4)
- 40 Cleverly recorded - can't go (8)
- 43 Pub's bill for wine (6)
- 44 Rigid habit of the medieval ages (6)
- 45 Full of zeal for a new trend (6)
- 46 A story which is an attempt verse (6)
- 52 Pack animal turns to run (4)
- 53 Listen and learn (4)
- 54 A spot of trouble over a pupil? (4)
- 56 One is thwarted by Jack for a flirt (4)
- 60 Two points on a card (3)
- 61 Part of a week-end supplement (3)
- 62 Blade used on a cutter perhaps (3)
- 63 One point to the future, nothing to us (3)
- 67 Turkey check (3)
- 68 Wage rise? Just talk (3)
- 69 Look at the middle of a cyclone (3)
- 68 Inspired piece of music (3)
- 90 Leave note attached to article (3)
- 90 Regret expressed in the French way (3)
- 71 Limb turned to solid jelly (3)
- 72 Have to concede (3)
- 73 Female sheep quarters (3)
- 74 It had a fling of fancy (3)
- 77 It describes a foot in metres (6)
- 79 Story book is a gift (6)
- 80 Courage necessary on roads (4)
- 86 Initial repetition is only repetition after-
all (12)
- 82 It can't be passed in silence (4)
- 83 Pause for recreation (8)
- 84 Learn to become easy-going (8)
- 85 See 77, across
- 86 It suffers periodic reversals in the kitchen (3-5)
- 87 Means of transport, sometimes sprung (4)
- 89 There's an element of heat in it (8.4)
- 90 University stream (4)
- 91 A double dose in fact (6)
- 92 Synonyms, according to an enemy's version (2-3)
- 96 Catch lightning (4.2)
- 97 Short answer (4)
- 98 A man who is a bit of a (5)

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104. Learns the hard way and packs up (5)
 105. Composer right off his evening meal (5)
 106. Act as a paid informer (5)
 109. Mathematician of the naughty nineties? (8)
 110. It will contain a fire (8)
 113. Country artist with an outstanding level of intelligence (4)
 113. Masters the conversion of hectares (8)
 114. The elder was made King of England (5)
 117. Mine that's still wingless? (5)
 118. A successful one wants a lot more than his rivals (6)
 119. It's reddish-brown, but not orange (6)
 120. A 3 hp Russian vehicle (5)
 126. Foreign money for rail development (4)
 127. Politician is about to see mischief-makers (4)
 128. Fine wine cuts may be left warm and dry (4)
 129. Hydrogen weapon can cause such damage (4)

OFFICIAL NAME _____

School _____

Address _____

Name of Contact at School/school sponsor _____

the stairroom of the school
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SCHOOL STAFFROOM CROSSWORD COMPETITION

Prizers will be awarded as follows:

- 6 1st prizes of books to the value of £150
- 10 2nd prizes of books to the value of £100
- 15 3rd prizes of books to the value of £75
- 20 runner up prizes of one copy of the New Edition of Collins English Dictionary (£14.50)

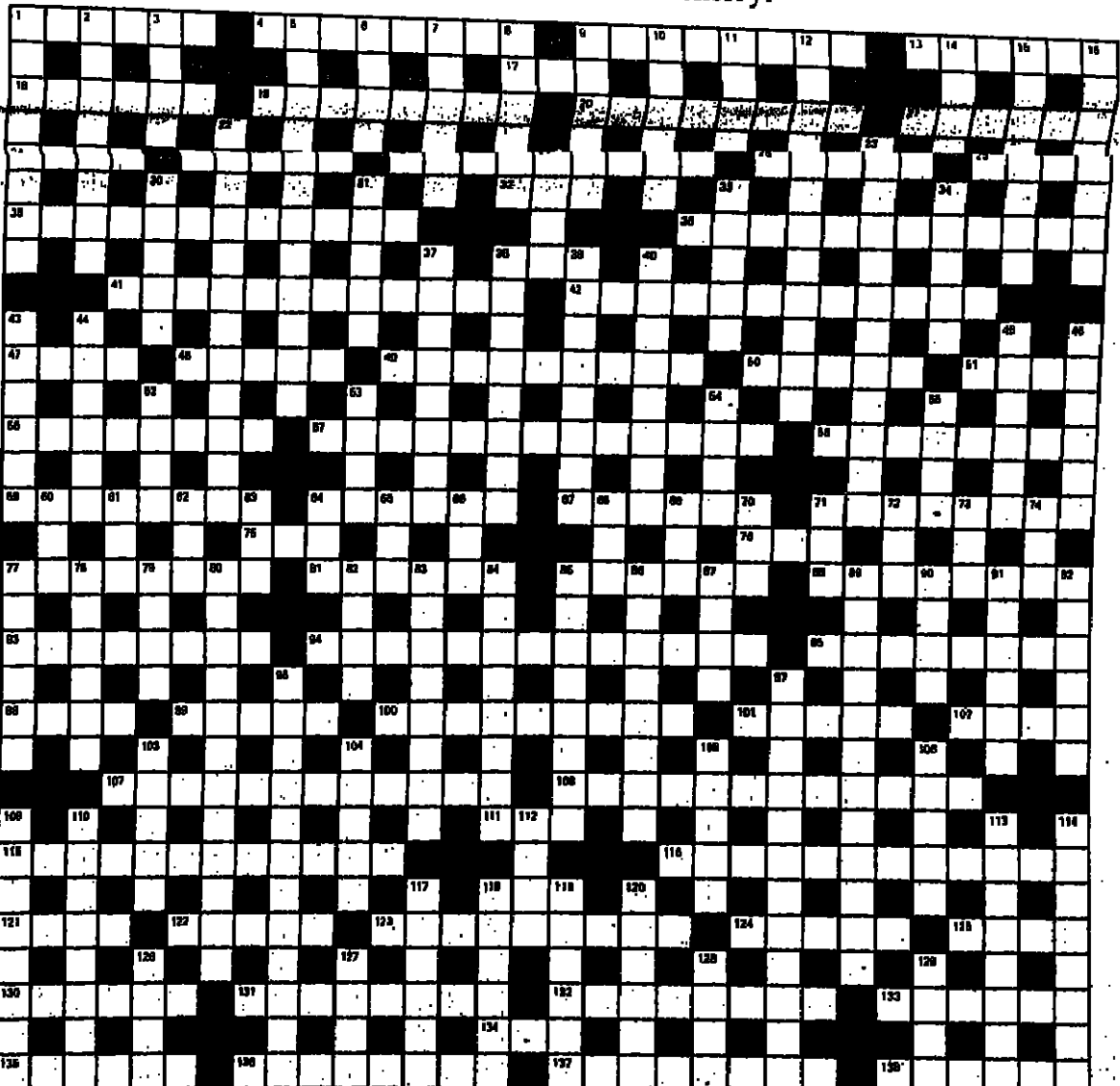
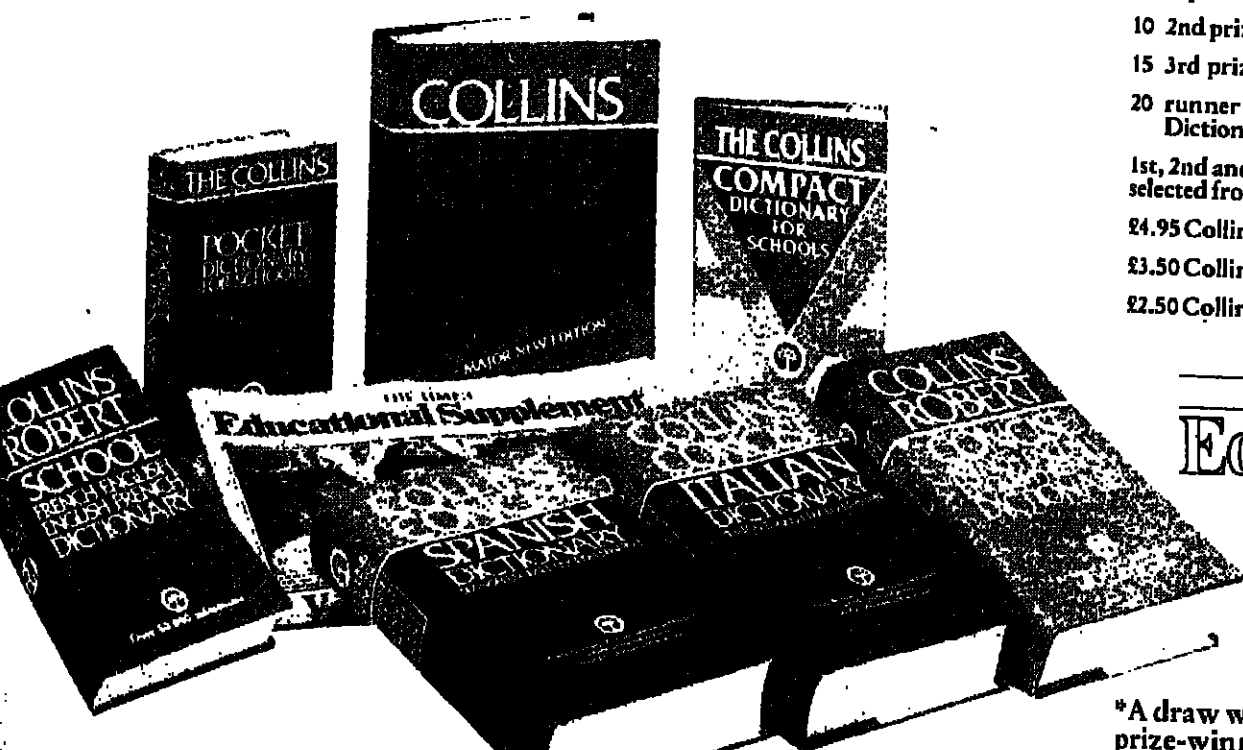
1st, 2nd and 3rd prizes may be taken as books for the school library selected from the Collins Catalogue or as class sets of the following:

- £4.95 Collins-Robert School French Dictionary (25 copies rate at £100)
- £3.50 Collins Pocket English Dictionary for Schools (20 copies rate at £60)
- £2.50 Collins Compact English Dictionary for Schools (20 copies rate at £40)

THE TIMES
Educational Supplement

 COLLINS
DICTIONARIES

*A draw will be made from the names of all the prize-winning schools and the staffroom of the school drawn will receive a case of sherry.



OFFICIAL ENTRY FORM

School

Address

Name of Contact at School/school sponsor

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**LEICESTERSHIRE
COUNTY COUNCIL**
An Equal Opportunity
Employer
**GROBY COMMUNITY
COLLEGE**
Ratby Road, Groby,
Leicestershire LE6 0PP
(14-18 Upper)
N.C.R.: 800
**SUBJECT: POTTERY
SCALE 1**
Required January 1981
an enthusiastic teacher of
Design to develop pottery
within the college, both as
part of the core course and
as an optional specialism. The
candidate is to be a
M.E.G. Design C.G.C.E 5
teacher and to deliver the
course for all sixth and sixth
year students within one

Please contact the Head-
cher for further details
1 application

SURREY
EDUCATION COMMITTEE
MATTHEW ARNOLD SCHOOL
Kingston Road, Staines,
Middx.
12-16 Mixed Comp. 490 unfor
Required January 1987, tem
porary Scale 1 teacher of AR
& DESIGN leave. The success
Maternity leave to cover a period
full applicant will be expected
to complete in GC level and
CSE in the 5th year. CS

Staines and application
from the Headteacher
Staines 57275.
351 13122

SURREY
EDUCATION COMMITTEE
HOWARD OF EFFINGHAM
SCHOOL
Lower Road, Effingham,
Surrey
1000 Mixed Comprehensive
Required for January Age

be considered.
only by letter and cv
master who will

Careers

Heads of Department

NTY COUNCIL
e see display advertise
on Page 59.
54) 13141

Scale 1 Posts

LONDON W6
THE SACRED HEART HIGH SCHOOL
212 Hammersmith Road W6
7DG
Tel: 01-748 7500
(Girls R.C. Comprehensive)
Roll: 337
Headmistress: Sister M.
Russell
Required from January, 1987 a
part-time teacher (Governess),
preferably Carers/Sociology.

g date: 24th October.
(33360) 131422

SURREY

COUNTY COUNCIL

LONDON ALLOWANCE £282 p.a.
inty.
g may be available.
an expense in covered cases

ADSHIP

well, Surrey.
naive
6th Form
RST DEPUTY HEADTEACHER,
£16,185 + £282 Surrey Area Allowance.
further details from: N.E. Area Educa-

(40012)

SECONDARY GEOGRAPHY

continued

BURY
EDUCATION COMMITTEE
THE WARRICK SCHOOL
NORFOLK, Bury 11 4AD
Tel: 01823 6333
15-16 Mixed Comprehensive
School, Bury 11 4AD
TEMPORARY Scale 1 Co-ordinator
Required for January 1987, from
January/February 1987 to cover
absence of Headteacher.
Application form and further
details available from the
Headteacher. (33040) 132622

History

Scale 2 Posts and above

HUMBERSIDE
COUNTY COUNCIL
EDUCATION DEPARTMENT
ST. JOHN'S SCHOOL
TRINITY ROAD, HUMBERSIDE
Tel: 01482 5111
15-16 Mixed Comprehensive
School, Humberside
Required for January 1987, from
January/February 1987 to cover
absence of Headteacher.
Application form and further
details available from the
Headteacher. (33040) 132622

LONDON N1
THE SCHOOL OF ST. DAVID &
ST. KATHARINE
101, KATHARINE AVENUE, LONDON N1
Tel: 01-582 8899
15-16 Mixed Comprehensive
School, London N1
Required for January 1987, from
January/February 1987 to cover
absence of Headteacher.
Application form and further
details available from the
Headteacher. (33040) 132622

U.S.A./EUROPE
Teach on exchange U.S.A./
Europe

Scale 1 Posts

BARNET
LONDON BOROUGH
BARNET SCHOOL
CENTRAL SQUARE, HAMPSTEAD
Tel: 01-482 8899
15-16 Mixed Comprehensive
School, Barnet
Required for January 1987, from
January/February 1987 to cover
absence of Headteacher.
Application form and further
details available from the
Headteacher. (33040) 132622

**CYNOR SIR
DYFED
COUNTY COUNCIL**

1. GLANMOR COMPREHENSIVE SCHOOL, BURY
PORT, SA16 0AL

Applications are invited for:
(a) The post of Assistant Teacher (Scale 1) Mathematics. A
scale 2 post may be available for a suitable candidate. Ability
to teach up to Advanced Level an advantage.
(b) The post of Assistant Teacher (Scale 1) Physical Education
casualty department which enjoys excellent facilities. The
ability to teach hockey could be helpful.
Application by letter for both posts including curriculum vitae
and the names and addresses of two referees to the Head-
teacher by Friday, 24th October, 1986. Further details available
from the Headteacher.

2. HAKIN C.R. INFANT SCHOOL, PIOTON ROAD, HAKIN,
MILFORD HAVEN

Scale 1 Teacher required for 1st January, 1987.
Application forms are available on receipt of a s.e.d. form from the
Area Education Officer, Area Education Office, St. Thomas
Green, Havant, Hampshire, Dyfed, SA61 10Z to whom
they should be returned not later than 30th October
1986.

3. AALTON HOUSE UNIT, LLANSTEFFAN ROAD,
JOHNSTOWN, CARMARTHEN

Applications are invited for the post of TEACHER IN CHARGE
of a unit which caters for the specific needs of pupils
in Special Education with profound learning difficulties. The
successful candidate will be expected to lead a team of
teachers and support staff in the provision of a high quality
education for these pupils. The successful candidate will be
expected to lead a team of teachers and support staff in the
provision of a high quality education for these pupils. The
successful candidate will be expected to lead a team of teachers
and support staff in the provision of a high quality education
for these pupils. The successful candidate will be expected to
lead a team of teachers and support staff in the provision of a
high quality education for these pupils. The successful candidate
will be expected to lead a team of teachers and support staff
in the provision of a high quality education for these pupils.
N.B. Previous applicants need not be apply.

Home Economics

Heads of Department

NORTH TYNSIDE

**METROPOLITAN BOROUGH
EDUCATION COMMITTEE**
REDAVENS SCHOOL
ROSEDALE, KILLINGWORTH
Newcastle upon Tyne NE12
06A
Required for 27th April 1987.
Scale 3 HEAD OF HOME
ECONOMICS. Previous applica-
tions will be considered.
Application forms are avail-
able on receipt of a s.e.d. form
from the Headteacher to whom
they should be returned as soon
as possible.
It is the policy of this Council
to provide employment
opportunities and con-
sideration will be given to
suitably experienced and qual-
ified applicants regardless of
sex, race or marital status.
(33991) 133020

Scale 2 Posts and above

CROYDON

**THE LONDON BOROUGH
EDUCATION COMMITTEE**
PURLEY HIGH SCHOOL
FOR GIRLS
Stoneyfield, Surrey CR3
4YD
Tel: Downland 51101

Scale 2 available for
suitably qualified candi-
dates. Applications should be
submitted by 15th October 1986.
Closing date: 15th October 1986.
133020

WARWICKSHIRE

EDUCATION COMMITTEE
THE STEPHEN ARLOU
Teacher of Home Economics
required for January 1987, from
January/February 1987 to cover
absence of Headteacher.
Application form and further
details available from the
Headteacher. (33040) 132622

WARWICKSHIRE

EDUCATION COMMITTEE
THE STEPHEN ARLOU
Teacher of Home Economics
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January/February 1987 to cover
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Application form and further
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Mathematics

Heads of Department

JERSEY

**STATES OF JERSEY
EDUCATION COMMITTEE**
LE ROCQUER SCHOOL
NOR 550, 11-16 Co-ed.
Required for 22nd
April, 1987, or before if
possible.

JERSEY

**STATES OF JERSEY
EDUCATION COMMITTEE**
LE ROCQUER SCHOOL
NOR 550, 11-16 Co-ed.
Required for 22nd
April, 1987, or before if
possible.

JERSEY

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EDUCATION COMMITTEE**
LE ROCQUER SCHOOL
NOR 550, 11-16 Co-ed.
Required for 22nd
April, 1987, or before if
possible.

Mathematics

Heads of Department

JERSEY

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**KENT COUNTY COUNCIL
EDUCATION DEPARTMENT
WEST KENT AREA
Re-creation Consultant
SPRING GARDENS DAY
SPECIAL SCHOOL
Hurdett Road, Ruesshall,
Tunbridge Wells, Kent TN4
8TR**
Teacher required for January 1987 for a small mixed class of 12 Children with Special Needs within age range 7-11. Sound experience in special education and possession of

the education of children with Special Needs would be a strong recommendation for a local (3a) post for suitable qualified and experienced teacher.

Further details and application form (S.A.E.) from the Headmaster to whom the should be returned as soon as possible. (31244) 16002

KNOWSLEY
CARMERLEY SCHOOL
Arncliffe Road, Knowsley,
Merseyside L25 9PS
30 pupils on roll
Vacancy exists for a Seal
(2B) teacher.

severe learning difficulties. The school also has a pupil

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COMPREHENSIVE SCHOOLS
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D.R. 767 approx.
TEMPORARY TEACHER OF
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Further details to Headteacher
The County Council
a policy of equality
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1. Immediately Scale 1
of Drama. Drama is an
important part of the cur-
riculum for the first three
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equipment (fleurbaeys and
a purpose built Drama
room) and a teaching will be
provided. The school should
be able to offer details of
the school's available
resources. (no forms)
The school should be able to
provide a letter enclosing full
details of the school's
resources and a copy of the
school's policy on drama.
The school should be able to
provide a copy of the school's
policy on drama.

Required for January 1987, a Scale Teacher to join the CPVE department in this school with a minimum of Sixth Form. The winner will offer either History and/or Business Studies: would be an advantage.

Further details may be obtained direct, by telephone from the Headmaster to whom letters of application must be sent.

Closing Date: 24.10.86

Enter London Allowance Available. (30188) 1986

Applications obtained from (SAB) and returned to the Headteacher, c/o P.M.I. note ref. no. P&M 1 Closing date: 27th October 1986. Friends applications will be automatically considered.

Liverpool City Council, Equal Opportunities, please send applications and welcome enquiries to Irrespective of race, sex, marital status, disability (1986) 9

Immediate
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post, which
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The person to
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The ability to
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Further de-
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ICB AND STUDIES

applications for the above will become January 1987. Appointed will to teach the to A level after another an advancement need not have experience

could may be the Principal, College, Hampdenre Tel.: (0990) 440099

children holiday other achievements Required iller, Grou S.A.S. form future Education Alliances Street ILU The Co policy trusts Closing completed November Previous confirm with the responsible

April 1987 or earlier.
 for application
 Officer, Sun
 House, 41 Wote
 Basingstoke, Hants
 County Council purposes
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 tunities.
 date for receipt of
 applications: 10th
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 Applicants should
 write that they
 are applying for
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SAWTRY VILLAGES COUNCIL
Sawtry, Huntingdon
We are looking for a new
soon as possible.
Teacher for Special
based at Sawtry Villages
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Senior Area Education
We are offering a
perienced teacher to
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Application forms a-
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**Nottinghamshire
County Council**
County Hall, West Bridgford
Nottingham NG2 7DP

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COLLEGES OF FURTHER EDUCATION

HAMPSHIRE
COUNTY COUNCIL
BARTON COLLEGE
Barton Road, Basingstoke
Hants. RG24 0AP
Tel: 01256 330000

Applications are invited from Accountants who can contribute to the teaching of Financial Accounting and Management Accounting on the National, BTEC Higher National and Professional courses. Experience of Computer in Business Systems would be useful. Previous teaching experience is an advantage. In-service training is available. The County Council pursues a policy of equality of opportunity.

Salary Scale: Lecturer II £8,595 - £13,656.
Application forms and further information may be obtained from: The Registrar, Basingstoke Technical College, Barton Road, Basingstoke, Hants. RG24 0AP. Tel: 01256 330000.

Wirral Metropolitan College

Principal:
J.H. Jackson, BSc, CEng, FIMechE, MBIM

HEAD OF COLLEGE DEVELOPMENT UNIT

(Head of Department Grade IV)

Applications are invited for the above key post in this Group 10 College which has become available due to promotion.

The successful candidate will be responsible for the expanding functions of marketing, industrial liaison and staff development and the development of new initiatives.

Application forms are available (large SAE please) from:
The Principal's Secretary
WIRRAL METROPOLITAN COLLEGE
Borough Road
Birkenhead, Wirral L42 9QD
(40048)

College of Technology

CONSTRUCTION DEPARTMENT

Lecturer Grade I in Plumbing

To teach on City and Guilds Course No. 598 603 to commence on 1 January 1987.

SALARY: £9,843 - £11,865 plus £292 fringe area allowance

Generous relocation expenses in accordance with Surrey County Council scheme.

For application form and further details please contact:
The Staffing Officer, Guildford College of Technology,
Stoke Park, Guildford, Surrey GU1 1EZ.

CLOSING DATE: 31 OCTOBER 1986

(40078)

GCIT

SCHOOL OF OCCUPATIONAL THERAPY

ST. ANDREW'S HOSPITAL, NORTHAMPTON NN1 5DG

Applications are invited for a lectureship (or senior lectureship) in

ANATOMY and PHYSIOLOGY

The person appointed would be expected to contribute to the development of the course and have a particular interest in functional application.

A knowledge of rehabilitation, kinesiology, or sports science would be an advantage.

Salary to be negotiated; commensurate to qualifications and experience.

Closing date for applications - 7 November 1986.

Further particulars and application form available from:
Elizabeth Cracknell (Mrs.)
Director of Training.

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ENFIELD BOROUGH OF FURTHER EDUCATION DEPARTMENT
BRUNNICK COLLEGE
College Road, Enfield, Middlesex EN1 1JH
Tel: 0181 861 1111

Applications are invited from Lecturers in the following areas:

1. LECTURER I in SECRETARIAL STUDIES. To teach on City and Guilds courses.
2. LECTURER I in MATHEMATICS and COMPUTING. To teach on BTEC National Information Technology courses.
3. LECTURER I in MATHEMATICS. To teach on BTEC National Certificate and GCE 'O' and 'A' level courses.
4. LECTURER I in ECONOMICS. To teach on BTEC National and Higher National courses in Business Studies.
5. LECTURER I in LADIES' AND MEN'S HAIRDRESSING. To teach on City and Guilds courses.

Further particulars and application forms are available from the Principal, Brunnick College, College Road, Enfield, Middlesex EN1 1JH. Tel: 0181 861 1111. Closing date for applications: 31 October 1986.

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2. LECTURER I in MATHEMATICS and COMPUTING

3. LECTURER I in MATHEMATICS

4. LECTURER I in ECONOMICS

5. LECTURER I in LADIES' AND MEN'S HAIRDRESSING

Further particulars and application forms are available from the Principal, Brunnick College, College Road, Enfield, Middlesex EN1 1JH. Tel: 0181 861 1111. Closing date for applications: 31 October 1986.

(40088)

ENFIELD

ENFIELD BOROUGH OF FURTHER EDUCATION DEPARTMENT

BRUNNICK COLLEGE

College Road, Enfield, Middlesex EN1 1JH

Tel: 0181 861 1111

Applications are invited from

Lecturers in the following areas:

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Lecturers in the following areas:

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HERTFORDSHIRE

HERTFORDSHIRE COUNTY COUNCIL
READING COLLEGE OF TECHNOLOGY
College Road, Hemel Hempstead, Herts. AL9 9QJ
Tel: 0462 555555

Applications are invited from Lecturers in the following areas:

1. LECTURER I in SECRETARIAL STUDIES. To teach on City and Guilds courses.
2. LECTURER I in MATHEMATICS and COMPUTING. To teach on BTEC National Information Technology courses.
3. LECTURER I in MATHEMATICS. To teach on BTEC National Certificate and GCE 'O' and 'A' level courses.
4. LECTURER I in ECONOMICS. To teach on BTEC National and Higher National courses in Business Studies.
5. LECTURER I in LADIES' AND MEN'S HAIRDRESSING. To teach on City and Guilds courses.

Further particulars and application forms are available from the Principal, Reading College of Technology, College Road, Hemel Hempstead, Herts. AL9 9QJ. Tel: 0462 555555. Closing date for applications: 31 October 1986.

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HERTFORDSHIRE

Examiners

THE ASSOCIATED EXAMINING BOARD

The Board invites applications for the post of CHIEF EXAMINER for ART, PAINTING, SCULPTURE, HISTORY AND TECHNIQUE at ADVANCED LEVEL for the 1988 examinations.

Applicants should have a degree or equivalent qualification in a relevant subject and a minimum of four years recent relevant teaching experience, and experience of examining.

Further information and application forms may be obtained from The Secretary General (A10), The Associated Examining Board, 51, Hill House, Guildford, Surrey GU2 5XJ, to whom completed forms should be returned not later than 7th November, 1986. (338641) 600000

Miscellaneous

A SALES CAREER with Sun Life of Canada offering an interesting and rewarding future, combining security and real opportunity. Full training, unlimited prospects and executive income. Suitable applicants, aged between 24 and 40, can be employed in the area of their choice. Phone 01-930 3400, Ext. 267 or write Mr. N.J. Colley, 2/4 Cockspur Street, London SW1Y 5BH. (18419) 600000

DRAMA TEACHERS Part-time required to take over Children's Theatre Workshops, Sutton & Epsom. Details 01-393 8439. 600000 (335531)

LONDON WC1 COURSE CO-ORDINATOR, circa £9,000 p.a. for educational charity to monitor & expand our training workshops (eg typing, computing, retail training). Matures and enthusiastic desirable. Send full details and CV to: The Director, 15, Spring House, Marney St., London WC1X 0HT. (33133) 600000

KENT THE CLEVER SCHOOL OF LANGUAGES. Cambridge, Kent, member of the CLEVER Group, offering many languages including English, French, German, Spanish, Italian, Japanese, Chinese, Russian, etc. for all ages. Key location with country to grow with small but enthusiastic team. Essential qualifications: annual business sales and organizational ability. Degree or HSA dip TEF. Write with CV to: The Clever School of Languages, 42 Upper Grosvenor Road, Tunbridge Wells TN1 2ET. (335531) 600000

DRAMA TEACHERS Part-time required to take over Children's Theatre Workshops, Sutton & Epsom. Details 01-393 8439. 600000 (335531)

SUMMER TEACHING JOBS IN AMERICA work on American summer camps, mid June to end August; see ad under 'Holidays and Education' (334438) 600000

Outdoor Education

BERKSHIRE

RHOS-Y-GWALIAU Outdoor Education Centre, Bala, Gwynedd

Applications are invited for the post of Head Teacher at the above centre. Applicants should be qualified teachers with substantial experience in outdoor education and they should be capable of contributing to a level field study course. Qualifications in a variety of outdoor pursuits are essential together with a keen interest in ecology and conservation.

Salary: Headteacher: Burnham Group 4.

Further particulars and application forms, to be returned by Monday, 3rd November, can be obtained from the Director of Education, Education Department, Berkshire County Council, Shire Hall, Reading RG1 1AA. (Ref: PDC)

An Equal Opportunity Employer. (33883) 600000

COURTLANDS ADVENTURE CENTRE Water sports, outdoor education, educational projects. See Field Study Centres. (33610) 600000

DEVON SKERN LODGE OUTDOOR CENTRE. The professionals in Outdoor Education. Single or Multi-Activity and/or Field Study Courses for groups or individuals. For the best in instruction, equipment, facilities and value ring Martin or Andy on 01606 (02572) 7395 or write to Skern Lodge, Skern, Bideford, Devon EX39 1NG. Send our advertisement on Page 22. (12732) 600000

SKILLS DEUX/ALPE D'HUEZ Appointments for four. Executive days executive. Alain D'Huez 2155 for 7 days. 26 December. November. De la Vallée, Yvelines, France. 910675 24 hrs. & until 9.00 p.m. (339781) 600000

ISLAND SCHOOLS '87 Give your children a chance to experience the excitement of outdoor education. Opportunities for all ages. For more information, contact the Island Schools '87, 11, Northmoor Way, Dorset BH8 1JL. (33418) 600000

LLANDUDNO TYR BRODYR ACTIVITY CENTRE. Llandudno Residential Courses for all ages. For more information, contact the Llandudno Residential Courses, 11, Northmoor Way, Dorset BH8 1JL. (33418) 600000

COUNTY OUTDOOR PURSUIT ORGANISER
Qualified teacher
scale 4

Applicants are invited for this new post within the Post 16 Division of Education Department, based in or around Ipswich.

In co-operation with Community Education Teams and the Senior PE Advisor, the postholder will promote and develop opportunities for pupils, young people and where appropriate, adults to participate in outdoor activities. The County already possesses facilities locally which the postholder will be expected to develop, along with searching for extra opportunities.

Candidates should be qualified and experienced teachers with evidence of experience in organising, managing and promoting outdoor activities including watersports.

Salary will be according to Burnham Scale 4. The successful candidate will be expected to arrange his/her working time by agreement with the demand for this type of activity and a considerable amount of activity take place in school holidays. Conditions will be according to the Youth and Community Workers to take account of this requirement.

Application forms and further details are available from the Post 16 Education Officer, Education Department, St Andrew's House, County Hall, Ipswich, IP4 1JL. Tel. Ipswich (0473) 65001 Ext. 5. S.a.s. please. Closing Date: 27th October 1986

Contact: John Bouldstone
ABS Computers Ltd
North Street
Sussex
A Trafalgar House Company. Tel: 0273 421509 (00399)

T.V.E.I.
Residential
Courses

Special Discounts on 5 Day Residential Courses available only during December 1986, January and February 1987. Mountain Ventures offers expertly planned Residential Courses in discussion with clients to meet the demands of T.V.E.I. schemes.

Our courses not only develop problem solving skills and initiative in students but also help emphasise learning by doing and giving, that is EXPERIENTIAL LEARNING. All our students are given real tasks to perform and real problems to solve within a residential environment.

Find out more about our T.V.E.I. (and C.P.V.E.) courses of outdoor and residential experience by writing to Mountain Ventures Ltd., 119 Allerton Road, Liverpool L18 2DD. Tel 051 724 2732.

OUTDOOR EDUCATION

KENT Two instructors required to join enthusiastic team in a busy centre with wide variety of courses. Good experience/qualifications required in at least two activities from skiing, canoeing, sailing, mountaineering, etc. Minimum age 25. Living in Kent, industrial training experience a possible advantage. £5,600 on plus from food accommodation. Bowles Outdoor Centre, Tunbridge Wells 0892 64127 for details. (33612) 600000

NEXT SUMMER IN AMERICA

CAMP AMERICA offers teachers, nurses and students over 18 years of age the opportunity to be camp counsellors for 5 weeks to teach sports, arts and crafts in an American summer camp. Benefits include FREE return flight, FREE board, pocket money and up to 5 weeks free time. Write NOW to CAMP AMERICA, Dept. TE 37, Queens Gate, London SW7 0BT 01-581 2378. 600000 (312041)

SKI COURSE ORGANISER Part II Course (Personal Performance and Group Leadership) for 28th December £380 fully inclusive. Please contact Mary or Judith on 262 6982/108. (3102) 600000

SUMMER TEACHING JOBS IN AMERICA

work on American summer camps, mid June to end August; see ad under 'Holidays and Education' (334438) 600000

TALLSHIPS

The ideal residential adventure experience for groups of young people. Prices from £5 per head a day.

For further information contact: The Clidon Trust, 31 Imperial Avenue, Maylandes, Chelmsford, Essex CM3 6AH. Tel: 0261 740943. 600000 (33187)

English as a Foreign Language

Is currently recruiting experienced teachers for positions in the UK and European Schools. Applicants should hold ASA qualification or equivalent and have experience of teaching Business English. Opportunities exist for career development within the Linguarama group.

Please send cv to: Linguarama, The Moorings, 27 Butler's Yard, Stratford, Warwickshire. (31278) 700000

V.S.O. Please see V.S.O. display at under Overseas Appointments. (31017) 700000

BOURNEMOUTH

ISA COURSES AT ITTC Learn to teach English as a foreign language at the International Teacher Training Centre, Bournemouth. The Centre offers a wide range of courses leading to the Royal Society of Arts Preparation Certificate in Teaching English as a Foreign Language. For details write to ITTC, 674 Wimborne Road, Bournemouth or Tel. (0202) 525537 (192528) 700000

LINGUARAMA

Is currently recruiting experienced teachers for positions in the UK and European Schools. Applicants should hold ASA qualification or equivalent and have experience of teaching Business English. Opportunities exist for career development within the Linguarama group.

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V.S.O. Please see V.S.O. display at under Overseas Appointments. (31017) 700000

WIMBLEDON

WIMBLEDON SCHOOL OF ENGLISH Requires a permanent full-time TEFL teacher. Degree plus R.S.A., T.E.F.L. DIPLOMA or equivalent qualifications are ESSENTIAL.

Salary on scale £8,500 - £9,200. Please send cv. to 41 Worples Road, London SW19 4JZ. (31519) 700000

English as a Second Language

BUCKINGHAMSHIRE COUNTY COUNCIL Equal Opportunity Employer. AYLESBURY VALE MULTI-CULTURAL SUPPORT TEAM. Required as soon as possible, a full-time Teacher to join the Multi-Cultural Support Team working in Primary and Secondary Schools in the Aylesbury Vale Area. The post is at St. Edmund's County Primary School and a Scale 2 post is available to a suitably qualified applicant.

Application form (S.A.S.) form and to be returned to: Acting Education Officer, Aylesbury Vale Area Education Office, Exchange Street, Aylesbury, Bucks. HP8 1UL. CLOSING DATE: 31st October 1986. (33475) 710000

MISCELLANEOUS CONTINUED

Department of Education and Science
HM Inspectors
of Schools

Applications are invited from men and women, preferably aged between 35 and 45, for appointment in England as HM Inspectors. HMI inspect educational institutions as part of both general and specialist assignments and provide advice to the Department and throughout the education system.

Further and Higher Education

For all these posts appropriate academic and professional qualifications are required together with substantial teaching and industrial/commercial/professional experience.

Agriculture and Horticulture (ref: 1/87) Applicants should have had substantial teaching and management responsibility within the field of agriculture and horticultural education.

Business and Management Studies The persons appointed will work across the full range of business and management courses in advanced and non-advanced further education; specialists in the following areas are required:

Accountancy (ref: 2/87) - applicants should hold a professional qualification from a major accounting body and have experience of teaching accounting at a professional or degree level.

Management (ref: 3/87) - applicants should have substantial industrial or commercial experience and have been recently engaged in teaching post-graduate and post-experience management students.

Business and Public Administration (ref: 4/87) - applicants should have had experience of business or public administration and be engaged in related teaching at a senior level.

Construction (ref: 5/87) Applications from Chartered Civil Engineers and Chartered Surveyors (quantity surveyors or estate management) would be particularly welcome.

Engineering (ref: 6/87) Applicants with experience in teaching in the non-advanced or advanced sector of further education are invited to apply.

Hotel and Catering Studies (ref: 7/87) Applicants should have teaching experience at the non-advanced or advanced levels with some involvement in pre-vocational course developments.

Non-Advanced Further Education (ref: 8/87) Applicants should have a non-advanced further education background in either general and communication studies (preferably with an honours degree in English) or the health and caring professions.

Computing and Maths (ref: 9/87) Applicants should have experience in teaching computing on a range of courses. Some involvement in non-advanced work and a responsibility for developing information technology across the curriculum would be an advantage.

Starting salary for all posts is within the range £18,020-£24,302. Relocation expenses of up to £3,000 may be payable.

Application forms (to be returned as soon as possible and not later than 4 November 1986) and further information may be obtained from Mrs S. Willis, Department of Education and Science, 39 York Road, London, SE1 7PH. Telephone: 01-934 0799/0799/0800.

The Civil Service is an equal opportunity employer.

ARE YOU AS KEEN TO TEACH AS
OUR TECHNICIANS ARE TO LEARN?



WHAT NOW?

You don't need to be a qualified teacher because if you're not already experienced, we'd teach you the art of teaching.

But you should have a degree in engineering, physics, mathematics or a computing discipline or you may apply if you have an HNC or TECHC in an engineering subject, together with a GCE 'O' level in English Language (or equivalent).

Alternatively, if you do have a teaching qualification it must be with mathematics or physics. We also have vacancies for linguists - especially German speaking.

You can apply for a 4 to 8-year gratuity-earning Short Service Commission or indeed, a commission for a longer period. Age on entry up to 39.

To find out more, call in at any RAF Careers Information Office (in the phone book under Royal Air Force) or write to Group Captain Paul Terrett, OBE, at (TG) Officer Careers (802/13/10), Stanmore HA7 4PZ, giving your date of birth and your present and/or intended qualifications.

What's more, we'll give you every facility to fulfil that role effectively.

You see, we believe in "hands on" teaching. Giving each pupil the chance to get to grips with the machine. Be it an oscilloscope or a jet engine, he'll learn more, quicker, if he's working in a small group.

But the instruction of the trainee technicians is only part of the job.

There are also numerous opportunities throughout the RAF for additional responsibilities, such as keeping all ranks - from airmen to officers - abreast of the continual advances being made in electronics, computer technology, radar, electrical and aeronautical engineering.

Advances which can only be applied effectively if they're taught effectively.



Exceptional Opportunities

within an outstanding new development

Set to open in April 1987 The Gyosei International School is a remarkable new educational development, a privately funded establishment equipped to cater for up to 900 Japanese children of primary and secondary age, whose families are based, through business commitments, worldwide. Occupying fully-equipped, purpose-built premises in Wilton Park on the outskirts of Milton Keynes, the school will aim to combine a Government-approved, full Japanese curriculum with a thorough grounding in Western - and specifically British - attitudes, language and culture.

It's to this end that we're now seeking to recruit a full complement of English speaking teaching and administrative personnel, to work alongside Japanese staff in helping us to create a truly international educational environment.

BURSAR

A highly experienced Bursar with exceptional organisational abilities is required immediately to help initiate and control a full range of financial and accounting systems, liaising closely with Japanese personnel in doing so. A strong interest in Japan would be helpful.

BI-LINGUAL SECRETARY

An immediate vacancy exists for a secretary who is fluent in both English and Japanese, and who also possesses fast, accurate typing/English shorthand and English/Japanese Word Processing skills.

TEACHING PERSONNEL

English (TEFL qualified), Geography, History (English and European), Maths, Chemistry/Biology, Primary, Music, PE, Domestic Science, Religious Education.

A broad range of both full and part-time opportunities for Graduates - preferably with some first-hand experience - exist across all the above disciplines. Each combines the opportunity to structure your own curricula with a uniquely international perspective on educational aims and achievements. Preference will be given to applicants with an interest in Japanese affairs, history and culture. Attractive, highly competitive salaries are offered.

MATRON

This opening is for a live-in Matron/Domestic Supervisor with the experience to ensure the general well-being of the pupils, and to help them adjust successfully to living away from home. An excellent salary is offered together with an attractive range of benefits and all live-in expenses paid. No knowledge of Japanese is necessary.

All positions carry an excellent range of benefits, including full relocation expenses if appropriate. Please apply in writing, enclosing full career details and any other relevant information, to: Lynne Watershouse, PEI, 14-16 Chapel Street, Luton LU1 2SU. Tel: (0582) 417562.

英国暁星国際学園

PER

